FEBRUARY 2011

40th ANNUAL REPORT

FY 2011-12

PROTECTION AND AUGMENTATION OF WATER SUPPLIES

Santa Clara Valley Water District

Santa Clara Valley Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

February 25, 2011

Dear water district stakeholder:

The Santa Clara Valley Water District has released its 40th Annual Report on the **Protection and Augmentation of Water Supplies**, which documents the water district's efforts to ensure a reliable water supply for Santa Clara County. The report presents the basis for the recommended groundwater production charges for fiscal year (FY) 2011-12, and is posted on our website, www.valleywater.org.

As required by the District Act, the report is published and filed prior to the water district holding public hearings on the groundwater production charges. Groundwater replenished by the water district makes up, on average, two-thirds of the water used by residents, businesses and municipal and retail water providers countywide.

With revenue from groundwater production charges, the water district protects and augments water supplies for the health, welfare and safety of the community, as provided by law. The activities, programs and services we undertake with funding from groundwater production charges include:

Water supplies
- Operate and maintain local reservoirs to capture water and fill recharge ponds
- Purchase imported water to replenish the groundwater basin

Water quality
- Monitor and protect groundwater from pollutants
- Ensure proper construction and destruction of wells to prevent contaminants from infiltrating the groundwater basin

Infrastructure
- Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer

After three straight years of keeping rates flat, the water district is proposing rate increases in its two groundwater zones for FY 2011-12 as follows:

North County Zone W-2 up to 9.4% average household increase of $1.69 per month
South County Zone W-5 up to 3.6% average household increase of $0.34 per month

No one likes to see rates rise, particularly in trying economic times. We take our role as stewards of public funds very seriously and have continued our managed approach to cost cutting to minimize the proposed increase. Like other water agencies throughout California, the district's water utility finances have been significantly impacted by reduced water usage beyond what was anticipated in response to the recent drought. In addition, the water district must respond to the needs of an aging and complex infrastructure system. The proposed increases are a small step toward funding a capital program that will keep critical assets like dams, pipelines and pump stations performing so that water continues to flow from your tap.

I encourage you to learn more about these important groundwater issues. In addition to the information on our website at www.valleywater.org, the following opportunities are also available for you to gather information and provide input:

March 16, 2011 3 p.m. to 8:00 p.m. • Drop in at your convenience • Presentations at 4:30 and 6:30 p.m.	South County Informational Open House Morgan Hill Community Center 17000 Monterey St., Morgan Hill
March 23, 2011 3 p.m. to 8:00 p.m. • Drop in at your convenience • Presentations at 4:30 and 6:30 p.m.	North County Informational Open House Santa Clara Valley Water District 5700 Almaden Expwy., San Jose
April 12, 2011 10:00 a.m. • Board meeting • Time certain	Public Hearing (opens) Santa Clara Valley Water District 5700 Almaden Expwy., San Jose
April 19, 2011 7:00 p.m. • Board meeting • Time certain	Public Hearing (continues) Morgan Hill Council Chambers 17555 Peak Avenue, Morgan Hill
April 26, 2011 10:00 a.m. • Board meeting • Time certain	Public Hearing (closes) Santa Clara Valley Water District 5700 Almaden Expwy., San Jose

If you have questions or concerns about groundwater, this year's charge-setting process, or how we can better serve you, please join us at an upcoming open house or public hearing, or visit our website, www.valleywater.org. You may also contact us directly by phone at (408) 265-2600, or email at clerkoftheboard@valleywater.org.

Sincerely,

Beau Goldie
Chief Executive Officer

PROTECTION AND AUGMENTATION OF WATER SUPPLIES 2011-2012

40th Annual Report

Santa Clara Valley Water District

Sections

1 Present Water Requirements and Water Supply Availability

2 Future Water Requirements and Water Supply Availability

3 Programs to Sustain Supply Reliability

4 Financial Outlook of Water Utility System

5 Appendices

Prepared Under the Direction of:
Jim Fiedler
Chief Operating Officer, Water Utility Enterprise

Contributors:
Terri Anderson
Linda Arluck
Erin Baker
Jerry de la Piedra
Amy Fowler
Dave Hook
Barbara Judd
Bassam Kassab
Mala Magill
John McHugh
Judy Nam
Miguel Silva
James O'Brien
Debra Osikominu
Alison Russell
Pat Showalter
Darin Taylor

Board of Directors:
Donald Gage, Chair – District 1
Linda J. LeZotte, Vice Chair – District 4
Joe Judge – District 2
Richard Santos – District 3
Patrick Kwok – District 5
Tony Estremera – District 6
Brian Schmidt – District 7

Graphic Design:
Benjamin C. Apolo III
Joy O. Lim
Ryan Mendoza, Intern

INTRODUCTION

This is the 40th annual report on the Santa Clara Valley Water District's activities in the protection and augmentation of water supplies. This report is prepared in accordance with the requirements of the District Act, section 26.5.

1 Section 1 of the report provides information on the present water requirements and water supply availability.

2 Section 2 addresses future water requirements and water supply availability.

3 Section 3 discusses programs needed to sustain water supply reliability into the future.

4 Section 4 provides the financial analysis of the water district's water utility system, including future capital improvement and maintenance requirements, operating requirements, financing methods and the recommended groundwater production charges by zone for fiscal year 2011-2012.

After three straight years of flat water rates, in FY 2011-12 the water district is proposing up to a 9.4 percent increase in the municipal and industrial groundwater production charge for the North County and up to a 3.6 percent increase for South County. These increases are necessary for critical capital program needs — including dam seismic retrofits — and meeting legally required debt service obligations. The proposed increases come after the district has reduced 82 jobs, reduced overtime by 39 percent, reduced fleet vehicles and deferred capital projects.

In 2010, more than 100,000 acre-feet, or 73 percent of groundwater pumped countywide, came from water imported from the Sierra Nevada mountains through the Sacramento-San Joaquin River Delta. The water district imports this water, then uses it in part to recharge, or replenish, the groundwater basins for a reliable water supply.

In addition, roughly 110,000 acre-feet of water used by households and businesses throughout the northern part of the county is treated and disinfected at the water district's treatment plants. Providing treated water to residents supplements and helps preserve groundwater.

Without the water district's actions to augment local supplies and replenish and preserve the groundwater aquifer, groundwater levels would decline, wells would run dry and permanent land subsidence (sinking of the ground) would occur again.

What do Groundwater Production Charges pay for?

What you get

Benefits

- Reliable, healthy and clean drinking water
- Diverse water supply sources
- Protected and sustained water resources
- Maximized water conservation and recycling

What we do

Replenish the groundwater basin

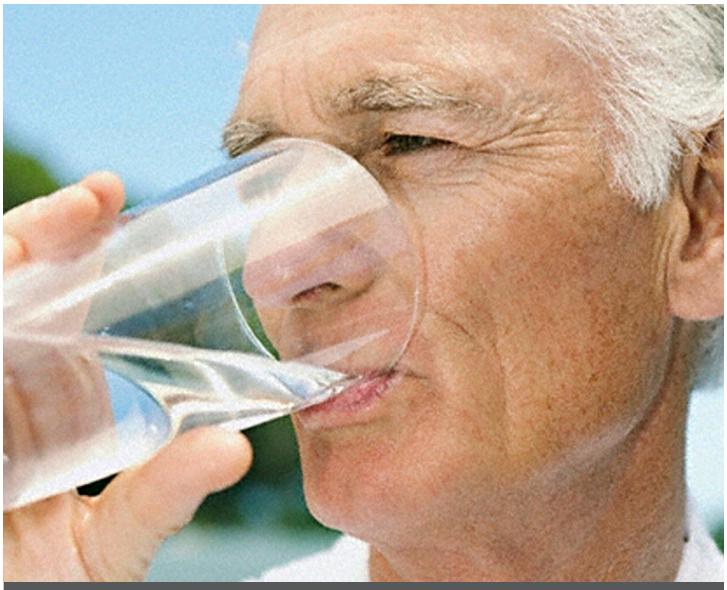
- Operate and maintain local reservoirs to capture water and fill recharge ponds.
- Purchase imported water.

Ensure safe drinking water

- Monitor and protect groundwater from pollutants.
- Ensure proper construction and destruction of wells.

Construct, maintain and repair

- Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations.
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer.



Santa Clara Valley Water District

The mission of the District is a healthy, safe and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective and environmentally sensitive manner for current and future generations.

LOCAL WATER

A complex network of reservoirs, creeks and specialized ponds replenishes the groundwater basin. The same system is also used to transport imported water so that it, too, can be used to replenish the aquifer. It all works so well that "managed" recharge actually exceeds natural recharge. Water pumped from the groundwater basin through wells is used by private well owners, farmers and water retailers. Some water captured in reservoirs is processed at state-of-the art drinking water treatment plants. The treated water is sold to local water retailers, such as San Jose Water Company, who use their own distribution systems to serve customers.

IMPORTED WATER

Much of the county's current water supply comes from hundreds of miles away, first as snow or rain in the Sierra Nevada range of northern and eastern California, then as water in rivers that flow toward the Sacramento-San Joaquin River Delta. This "imported water" is brought into the county through the complex infrastructure of the State Water Project, the federal Central Valley Project and San Francisco's Hetch Hetchy system. Three drinking water treatment plants deliver imported water to customers, while the rest is used to replenish groundwater basins. Having treated imported water available to meet demands protects the groundwater basin from overpumping.

RECYCLED WATER

An important and growing source of water is recycled water. Used primarily for irrigation by industry and agriculture, recycled water is wastewater that has been purified to meet strict standards set by the California Department of Health Services. Using recycled water helps conserve drinking water supplies, provides a dependable, drought-proof, locally-controlled water supply, reduces dependency on imported water and groundwater and helps preserve our saltwater and tidal habitat by reducing freshwater discharge to the bay.

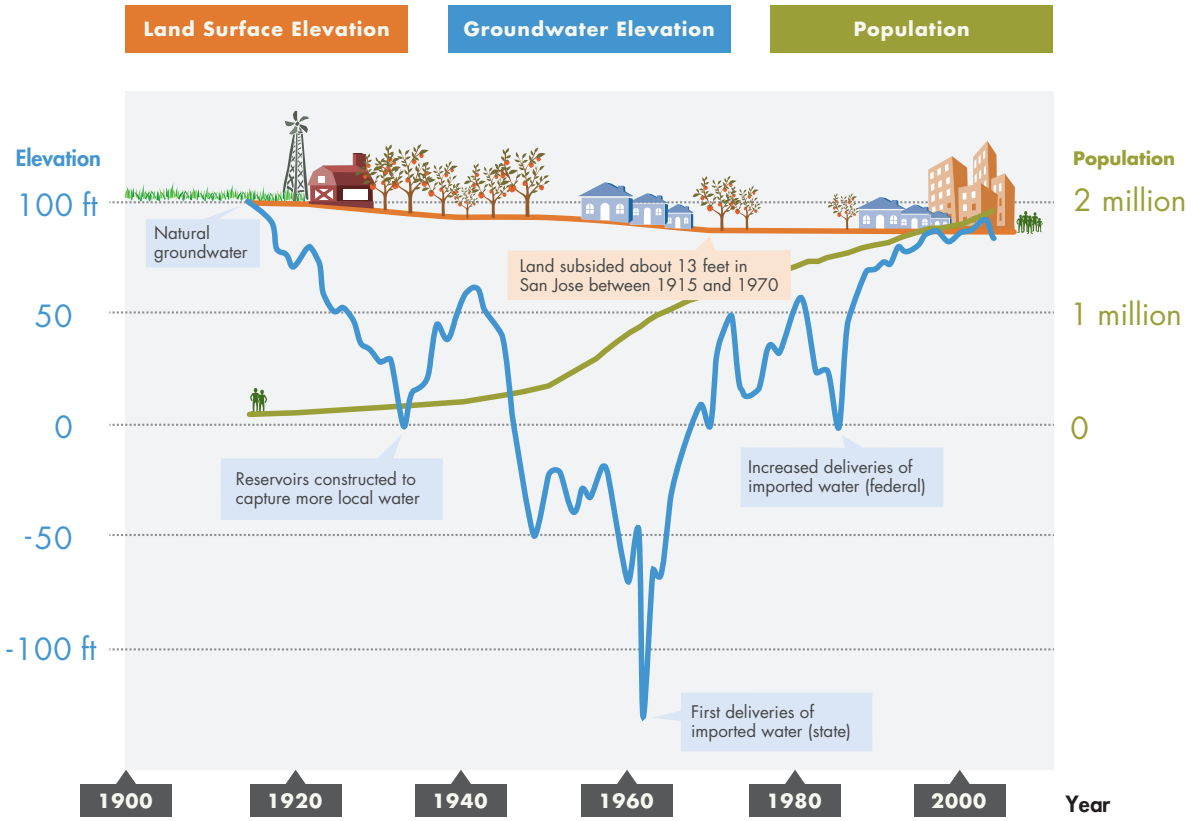
20 years of water planning

In the 20 years since the last extended drought, the water district has invested in a diverse water portfolio as a strategy to buffer impacts from shortages, maintain water in the groundwater aquifer and provide a reliable supply.

These investments lessen the magnitude of critical shortages in supplies due to hydrologic conditions and regulatory actions.

SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit



Over the years, the water district's water importation and groundwater management activities have stabilized groundwater levels and prevented land subsidence, or sinking.

Estimated 2010 total county water supply

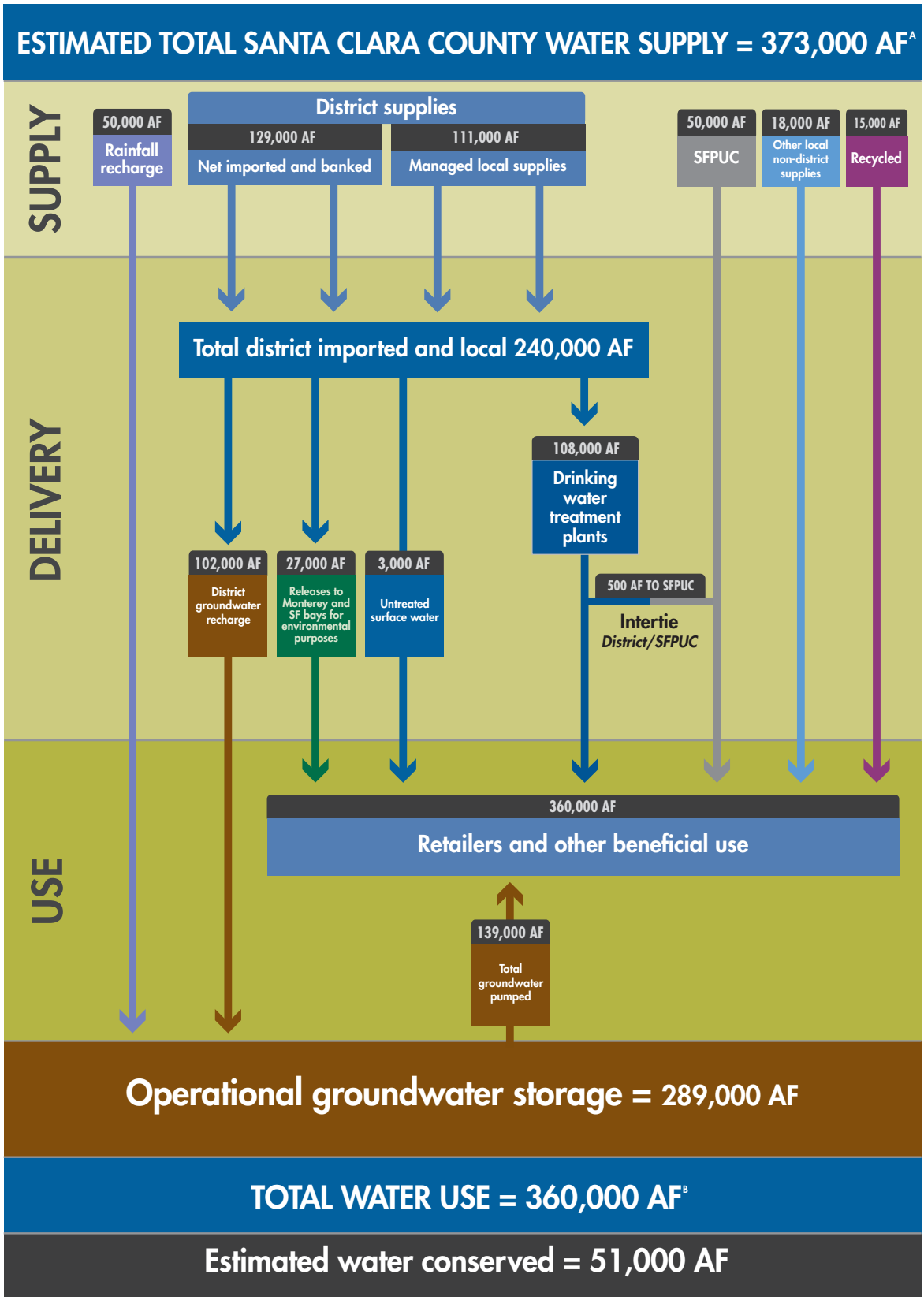
The chart at right shows calendar year 2010 estimated total water supply for Santa Clara County. Water from our 10 local reservoirs and water imported from the federal Central Valley Project and State Water Project is:

- Used to replenish local groundwater basins, which are pumped for use by individual well owners, municipal and retail water providers
- Sent to the district's three drinking water treatment plants for purification
- Supplied directly to water retailers
- Released to meet environmental needs and regulations

Non-district supplies in the county include rainfall recharge; water from San Francisco's Hetch Hetchy system; and private water rights. Note: stored groundwater is not included in the overall supply figure. For more detail on sources of supply, see Chapter 1.

Acre-foot: About 326,000 gallons, the amount used by two families of five over one year.

Calendar Year 2010



[A] Includes net district and non-district surface water supplies and estimated rainfall recharge to groundwater basins.

[B] Includes municipal, industrial, agricultural and environmental uses.

Water rates

Dollars Per Acre-Foot

Zone W-2
North County

Groundwater Production Charge	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Municipal & Industrial	$520.00	$520.00	$569.00
Agricultural	$16.50	$16.50	$17.10

Zone W-5
South County

Groundwater Production Charge	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Municipal & Industrial	$275.00	$275.00	$285.00
Agricultural	$16.50	$16.50	$17.10

Recycled Water Charges	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Municipal & Industrial	$275.00	$275.00	$275.00
Agricultural	$41.50	$41.50	$41.50

Zone W-2
North County

	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Basic User Charge	$520.00	$520.00	$569.00

Treated Water Charges	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Contract	$100.00	$100.00	$100.00
Non-Contract	$150.00	$50.00	$50.00
Total Treated Water Contract Charge	$620.00	$620.00	$669.00
Total Treated Water Non-Contract Charge	$620.00	$570.00	$619.00

After three years with no rate increase, the water district is proposing groundwater production charge increases of up to 9.4 percent for North County well owners, and up to 3.6 percent for South County. The increases are necessary to cover operating expenses, meet debt service obligations and fund critical capital program needs, including dam seismic retrofits. We've continued our managed approach to cost cutting and are projecting an operating expense budget for FY 2011-12 that is relatively flat compared to the prior year's budget. Even so, given the projected revenue shortfalls, water district revenues will fall short of what is needed without an increase. The recommended charges are shown in the right-hand column of the chart above.

1-1 WATER SUPPLY OVERVIEW

The mission of the Santa Clara Valley Water District (water district) is a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally-sensitive manner for current and future generations. Accordingly, staff employs an integrated approach to manage a sustainable water supply through conjunctive use of surface and ground water resources and maximizing water use efficiency.

Water supply is comprised of "incoming" supplies from local and imported sources, as well as previously-stored supplies withdrawn from in-county and/or out-of-county surface water and groundwater storage.

Local Supplies

Local groundwater resources make up the foundation of water supply in Santa Clara County, but they need to be augmented by the water district's comprehensive water supply management activities in order to reliably meet the needs of county residents, businesses, agriculture and the environment. These activities include direct and in-lieu groundwater recharge through the provision of treated surface water, acquisition of supplemental water supplies, and programs to protect, manage and sustain water resources.

The bulk of the local water supplies originate from runoff from precipitation, captured in local reservoirs and released for groundwater recharge and for the treatment plants. Some of the precipitation infiltrates and recharges the groundwater basins, although this natural recharge is insufficient to replenish groundwater extracted from the basins.

An additional local water supply is highly-treated recycled water used for non-potable purposes. Use of recycled water offsets demand for potable water and serves as in-lieu recharge.

Imported Supplies

The water district's imported sources of supply originate from natural runoff and releases from statewide reservoirs and pumped out of the Sacramento-San Joaquin Delta by the State Water Project (SWP) and federal Central Valley Project (CVP). The annual allocations of contracted supplies from the SWP and CVP are subject to cutbacks due to dry hydrologic conditions and to Delta pumping restrictions. The water district may also hedge against shortages by taking deliveries of available temporary flood flows from the Delta early in the year, before imported water contract allocations and local hydrology are known. Another remedy for shortages is through the purchase of transfer water or exchanges. Most of the imported water delivered by the SWP and CVP is sent to the water district's three water treatment plants and to supplement groundwater recharge. The treated water is sold to eight of the 13 water retailers located within Santa Clara County to offset groundwater pumping.

Additionally, eight water retailers purchase water from the City and County of San Francisco that originates from the Tuolumne River watershed and watersheds in the Bay Area. Without these supplemental supplies, groundwater pumping would exceed sustainable groundwater extraction levels.

Conjunctive Use Management

Although the groundwater basins are the water district's largest water storage facility, the limiting factor of providing a reliable water supply in drought periods is the overall capacity and capability to operate a conjunctive use system of surface and ground water supplies. Most of the local reservoirs were sized for annual operations, storing water in winter for release to groundwater recharge in summer and fall. The exception is the Anderson-Coyote reservoir system, which provides valuable carryover of supplies from year to year and can serve as a backup supply source to the water district's water treatment plants when imported water deliveries are curtailed. However, dam safety operating restrictions placed recently on Anderson, Coyote, Almaden, Calero and Guadalupe reservoirs have resulted in loss of about a third of the total surface storage capacity (as shown in Table 1-1.1) as well as significant loss of water supply yield.

Table 1-1.1 Original and Restricted Capacities of Major Water district Reservoirs

Reservoir	Year Built	Reservoir Capacity (acre-feet)	Restricted Capacity (acre-feet)	Use
Almaden*	1935	1,586	1,260	Recharge & treated
Anderson*	1950	90,373	51,250	Recharge & treated
Calero*	1935	9,934	5,671	Recharge & treated
Chesbro	1955	7,945	7,945	Recharge
Coyote*	1936	23,244	12,382	Recharge & treated
Guadalupe*	1935	3,415	2,738	Recharge
Lexington	1952	19,044	19,044	Recharge
Stevens Creek	1935	3,138	3,138	Recharge
Uvas	1957	9,835	9,835	Recharge
Vasona	1935	495	495	Recharge
Total		**169,009**	**113,758**	

* Reservoirs with dam safety operating restrictions

As part of its annual operations planning, the water district routinely opts to carry over a portion of its imported water supplies from one contract year to the next. Even though the amount is often limited by state or federal project operations, it provides cost-effective insurance against a subsequent dry year. Additionally, the water district has invested in a water banking program at the Semitropic Water Storage District which provides 350,000 acre-feet of out-of-county water storage capacity. Together with water transfers and exchanges, this additional storage helps the water district manage uncertainty and variability in supply as each water year develops.

Managing a complex system of surface water and groundwater resources is further complicated by hydrologic uncertainties, regulatory restrictions and aging infrastructure, as discussed in the following sections and chapters of this report.

1-2 PRESENT WATER SUPPLY CONDITIONS

Calendar year 2010 began with fears of the state entering a fourth year of drought. Historic low carryover storage levels in key statewide reservoirs and restrictive Delta export pumping rules resulted in a historic low initial allocation of five percent of SWP supply. With an unusually wet April, statewide water conditions improved dramatically and the state increased its final SWP allocation to 50 percent of contract amounts in late June. The US Bureau of Reclamation also increased its final CVP allocations to 75 percent for south-of-delta municipal and industrial (M&I) purposes and 45 percent for agricultural (AG) purposes. Table 1-2.1 summarizes the year types and final allocations from the SWP and CVP for the last four water years[1].

Table 1-2.1 Statewide Water Year Types and Final Imported Water Allocations

Water Year[1]	Year Type		Final allocations to the water district as % of contract amounts		
	Sacramento River	San Joaquin River	SWP	CVP	
				M&I	AG
2006–07	dry	critical	60%	75%	50%
2007–08	critical	critical	35%	75%	40%
2008–09	dry	below normal	40%	60%	10%
2009-10	below normal	above normal	50%	75%	45%

Locally, rainfall for the 2009–10 season[2] at downtown San Jose was at 120 percent of average[3]. Combined storage at water district reservoirs at the end of the 2009–10 water year was at 60 percent of capacity.

The 2010–11 water year began with a wet fall, despite the presence of La Niña ocean conditions which often result in drier conditions for the southwest region of the country. Statewide precipitation and snow water equivalent by December 31, 2010 were at 200 percent of seasonal average to date. Runoff and storage at key reservoirs were at 160 and 115 percent of seasonal average, respectively. January 2011 was extremely dry, however. With a few more months to go in the rainy season, it is unclear what type of water year 2010–11 will turn out to be.

Local rainfall as of January 31, 2011 ranges from 81 percent of seasonal average to date in San Jose to 110 percent in the Coyote watershed. Total storage at water district reservoirs as of January 31, 2011 was a little over half of capacity. However, because of storage restrictions in place for half of the water district reservoirs, the combined storage was at 83 percent of the reduced capacity.

[1] Water year is the twelve month period between October 1 and September 30.
[2] Rainfall season or year is the twelve month period between July 1 and June 30, same as fiscal year.
[3] Rainfall at San Jose (station 86) was approximately 16.7 inches or 116 percent of average for calendar year 2010.

While reservoirs are a visible indicator of our local water supply, the majority of our local reserves lies hidden beneath our feet in the groundwater aquifers. Because the groundwater basins can store three times more water than all of the local surface water reservoirs combined, the water district strives to maintain adequate storage in the groundwater basins in wet and average years to get through extended dry periods like the three dry years of 2007-2009. The water district's water management programs, including the mandatory 15 percent conservation target imposed in 2009 and extended to 2010, compounded with the economic recession and a wet spring, resulted in huge water use reductions in 2010.

Groundwater elevations at three index wells (see locator map in Figure 1-2.1), as indicators of groundwater trends and conditions, are shown in Figures 1-2.2 through 1-2.4. Overall groundwater conditions are healthy, with an increase in groundwater storage levels compared to 2009, as shown in Table 1-2.2.

Figure 1-2.1 Map of Index Well Locations

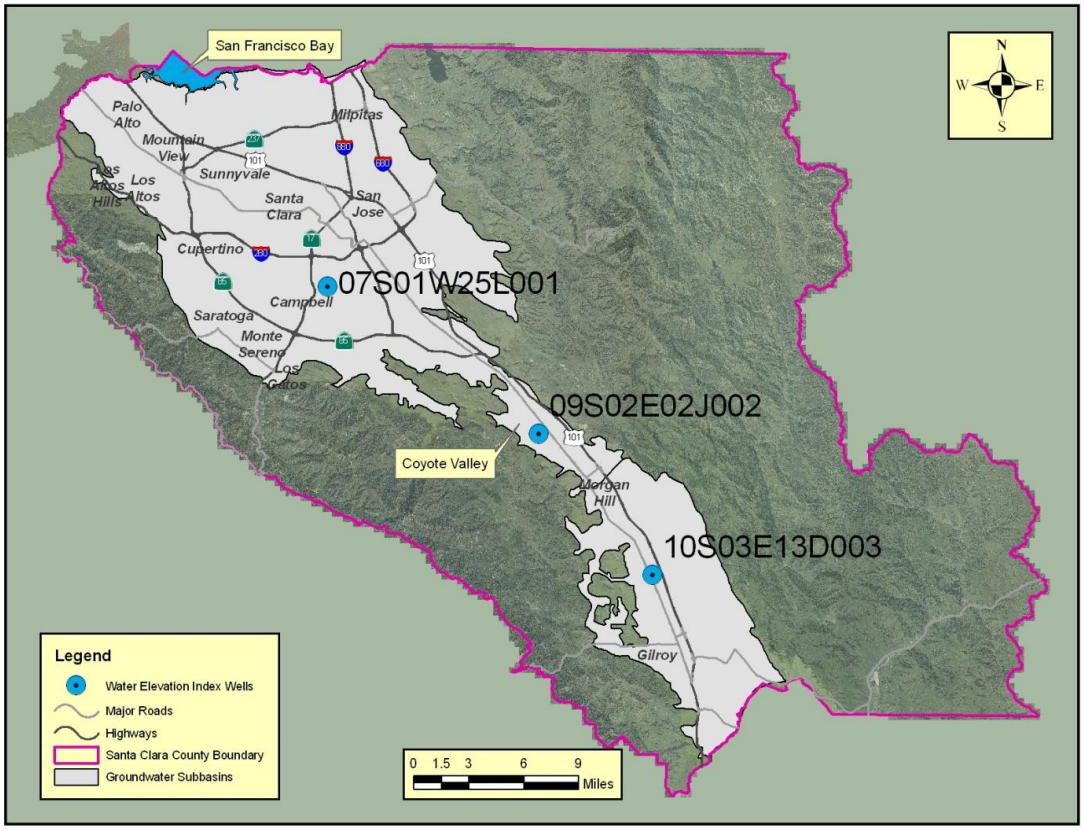


Figure 1-2.2 Historical Santa Clara Subbasin Groundwater Elevations, Index Well 07S01W25L001.

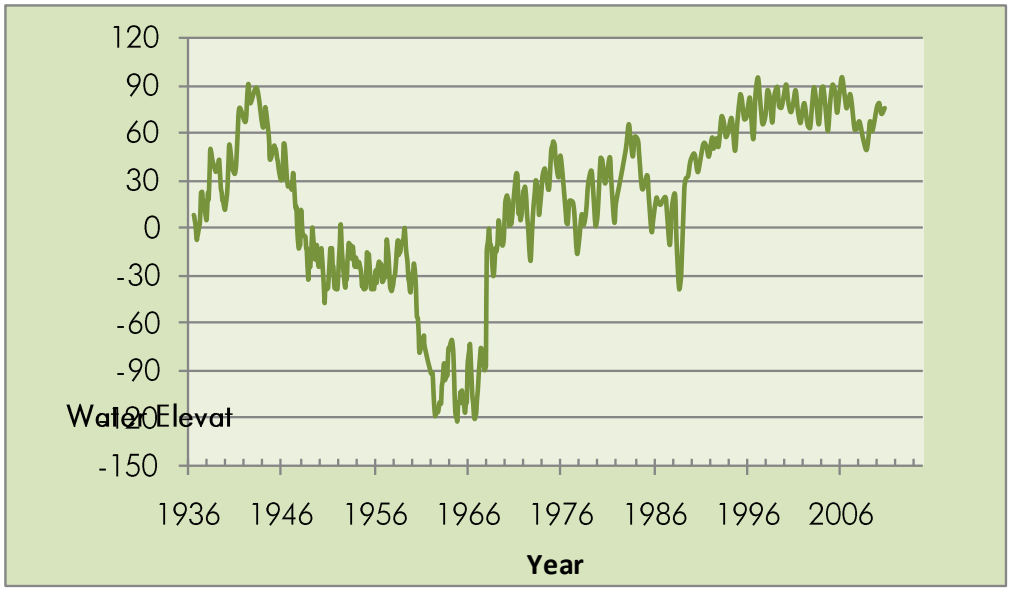


Figure 1-2.3 Historical Coyote Valley Groundwater Elevations, Index Well 09S02E02J002

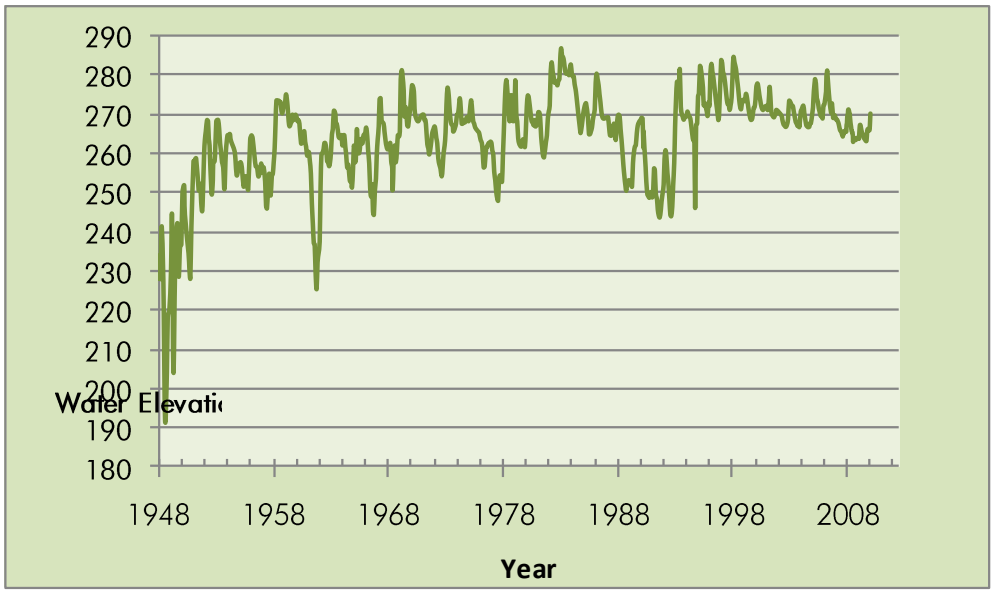


Figure 1-2.4 Historical Llagas Subbasin Groundwater Elevations, Index Well 10S03E13D003

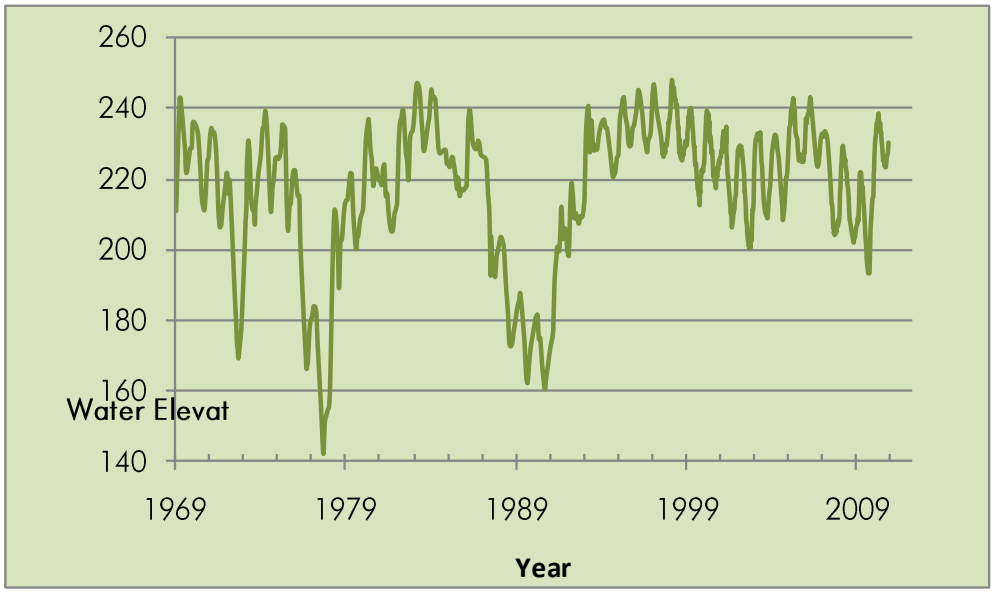


Table 1-2.2 End-of-Year Groundwater Storage and Change in Storage

	December groundwater storage, AF (acre feet)		Change in storage, AF
	2009	**2010**	
Santa Clara Valley Subbasin	243,700	253,100	9,400
Coyote Valley	4,200	3,700	-500
Llagas Subbasin	22,500	32,500	10,000
Total	**270,400**	**289,300**	**18,800**

1-3 PRESENT WATER USE AND WATER REQUIREMENTS

On February 27, 2009, Governor Schwarzenegger proclaimed a statewide drought emergency and requested that all urban water users reduce their individual water use by 20 percent. In March 2009, the water district Board of Directors adopted Resolution 09-25 calling for 15 percent mandatory conservation in response to a third consecutive dry year, court ordered pumping restrictions in the Delta, operational uncertainty and declining local reserves. In July 2010, the water district board adopted Resolution 10-60 which extended the call for mandatory water conservation for three months and decreased the quantity of water use reduction from fifteen percent to ten percent. In September 2010, the water district board adopted Resolution 10-76 calling for ten percent voluntary water conservation through June 2011.

The community responded well to the water district board's call for conservation and exceeded the goal by reducing water use by 19 percent for the time period of March 2009 through October of 2010. The savings are relative to the corresponding months of calendar year 2004 water use and are normalized for population growth. The steep reduction in water use was probably a result of the combined effects of a lingering

economic recession, a wet spring in 2010 and success of the water district's water conservation outreach and coordination efforts with cities, the retailers and the media.

Table 1-3.1 shows unadjusted historical water use in Santa Clara County and Table 1-3.2 shows a breakdown of groundwater production and managed recharge by water charge zone. Table 1-3.3 shows a historical summary of surface water supply, use and distribution for the last three years.

Table 1-3.1 Historical Water Use in Santa Clara County for Calendar Years 2008-2010

Historical Calendar Year Water Use	In Acre-feet		
	Actual 2008	Preliminary 2009	Estimated 2010
Groundwater	169,360	155,120	139,300
Treated Water	125,050	110,900	108,300
Raw Surface Water Deliveries	3,410	2,970	3,100
SFPUC Supplies to Local Retailers[1]	59,740	55,380	49,800
SJWC[2] **and Stanford Water Rights**	8,170	12,040	17,700
Recycled Water	15,250	15,280	14,700
Total M&I & AG[3] **use in Santa Clara Co.**	380,980	351,690	332,900

[1] San Francisco Public Utilities Commission supplies to 8 retailers and NASA-AMES
[2] San Jose Water Company
[3] Municipal and industrial and agricultural

Table 1-3.2 Groundwater Production and Managed Recharge by Water Charge Zone

Charge Zone	Zone W-2					Zone W-5				
	Groundwater Production, acre-feet			Managed Recharge		Groundwater Production, acre-feet			Managed Recharge	
Year	Agricultural	Non-Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production	Agricultural	Non-Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production
1997	1,910	118,550	120,460	78,040	65%	32,746	21,710	54,456	32,120	59%
1998	1,101	99,210	100,310	66,670	66%	25,861	20,009	45,870	26,130	57%
1999	1,087	106,403	107,490	80,900	75%	29,144	23,767	52,910	26,500	50%
2000	972	112,399	113,371	88,400	78%	26,920	24,537	51,457	30,200	59%
2001	752	114,606	115,358	84,620	73%	28,510	25,437	53,947	32,040	59%
2002	707	103,952	104,659	71,660	68%	27,537	23,787	51,324	35,300	69%
2003	447	96,208	96,656	74,200	77%	25,964	24,256	50,220	35,000	70%
2004	579	105,137	105,716	66,700	63%	27,634	25,533	53,167	31,000	58%
2005	826	86,640	87,467	69,200	79%	25,458	25,237	50,695	32,500	64%
2006	429	82,195	82,624	65,770	80%	24,420	28,616	53,036	30,440	57%
2007	1,087	108,748	109,835	58,000	53%	27,660	31,424	59,084	33,410	57%
2008	1,074	106,579	107,653	51,290	48%	28,183	33,520	61,703	36,100	59%
prelim. 2009	608	97,242	97,850	63,870	65%	24,874	32,400	57,274	38,710	68%
estim. 2010	660	81,190	81,850	61,680	75%	25,600	31,860	57,460	40,100	70%

Table 1-3.3 Historical Surface Water Supply, Use and Distribution for Three Previous Calendar Years

			Calendar Year, in Acre Feet		
			Actual 2008	Preliminary 2009	Estimated 2010
District Supplies					
Local Surface Water					
	Inflow	(net, minus evap)	61,160	65,570	131,500
	Releases from(+) or additions to(-) surface water storage		-6,270	5,120	-20,300
Imported Water					
	Prior year carryover		36,180	30,980	47,800
	Delta flood flows		0	0	0
	State Water Project contract allocation		35,000	40,000	50,000
	San Felipe Division contract allocation		110,740	81,310	112,400
	Semitropic water bank withdrawals		10,000	33,450	0
	Water transfers and exchanges		18,630	18,870	14,300
	From water transfers and exchanges				
		returned to District from SFPUC via intertie	290	320	500
Total District Supplies:			**265,730**	**275,620**	**336,200**
Distribution of District Supplies					
	To groundwater recharge				
		Santa Clara Subbasin	51,290	63,870	61,680
		Coyote Subbasin	14,530	15,530	12,540
		Llagas Subbasin	21,570	23,180	27,560
	To treated water		125,050	110,900	108,030
	To surface water irrigation		3,410	2,970	3,100
	To environment		11,590	11,330	27,470
	To Semitropic water bank		6,630	0	51,990
	To imported water carryover				
		Used by District	30,980	47,800	33,970
		Returned to SWP/CVP	680	0	0
	To water transfers and exchanges				8890
		returned to SFPUC via intertie	0	40	970
Total Distribution of District Supplies:			**265,730**	**275,620**	**336,200**
Other Supplies					
San Jose Water Co. & Stanford water rights			8,170	12,040	17,700
Recycled water (including District)			15,250	15,280	14,700
SFPUC deliveries to retailers			59,740	55,380	49,800
Total Other Surface Water Supplies			**83,160**	**82,700**	**82,200**
Total Managed Supplies:			**348,890**	**358,320**	**418,400**
Note: Numbers rounded to the nearest 10AF.					

2-1 OVERVIEW

As the water management agency and principal water wholesaler for Santa Clara County, the Santa Clara Valley Water District (water district) is responsible for planning (in collaboration with San Francisco Public Utilities Commission [SFPUC] and local retailers) the water supply of the county to meet current and future demand.

Water supply reliability includes the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that capture, store, transport, treat and distribute it. The water district strives to meet water demand under all hydrologic conditions, including satisfying its treated water contracts for deliveries to the retail water suppliers. As the groundwater manager for the county, the water district's goal is to ensure that an adequate groundwater reserve is available for the future.

Since water supplies available to the county are obtained from both local and imported sources, the water district's water supply is a function of the amount of precipitation that falls both locally and in the watersheds of Northern California. The supply available is also a function of the facilities in place to manage the supply. Sources of water supply in northern Santa Clara County (North County) consist of locally developed and managed water, recycled water, water imported by the water district via the State Water Project (SWP) and the federal Central Valley Project (CVP), as well as supplies to some of the retail water suppliers from the City and County of San Francisco's regional water system (Hetch Hetchy and Bay Area watersheds). Southern Santa Clara County (South County including Coyote Valley and Llagas Subbasin) is supplied by locally developed and managed water, recycled water, and CVP water.

2-2 PROJECTED FUTURE WATER SUPPLY AVAILABILITY AND DEMAND

Near Term Water Supply Availability

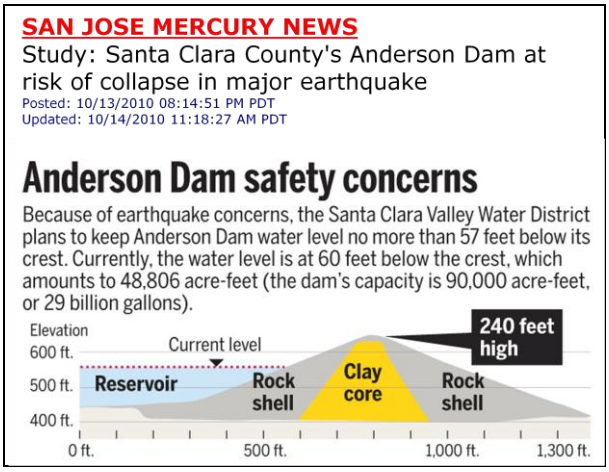
Water district staff begins preparing the water district's Annual Water Supply Operations and Contingency Strategy for the upcoming calendar year in the fall of each year. The strategy is composed of several operations and water supply management scenarios that account for the probable range of water supply conditions that the water district can expect in the upcoming year. These variable conditions include precipitation, both locally and in the Sierra, as well as imported supplies. Local precipitation and runoff impact our local reservoir storage, stream flow, and natural recharge of the groundwater basins. The quantity of precipitation in the Sierra and the timing of snowmelt impact the water district's imported water supplies that are conveyed through the Sacramento-San Joaquin Delta. Other factors that impact the water district's water supply include: infrastructure and facility limitations; planned and unplanned facilities outages; contractual obligations; the ability to bring in banked water district supplies from Semitropic Water Storage District; and regulatory, institutional and legal constraints.

As described in section 1 of the report, water year 2010–11 started with a very wet fall, despite strong La Niña ocean conditions of below normal sea surface temperatures across the central and eastern equatorial Pacific. In a La Niña, the weather is usually drier than normal in the Southwest and wetter and colder than normal in the Northwest through the northern and central Rockies. Contrary to usual trends however, precipitation in the sierra in October through December of 2010 ranged from 130 percent to 370 percent of monthly averages. January 2011 turned dry, however, with precipitation in the sierra of

23 percent to 43 percent of January averages. As of January 31, 2011, total precipitation to-date was above seasonal average, although it is difficult to predict how the rest of the season will turn out.

Because of the heavy precipitation and runoff in the Sacramento and San Joaquin watersheds and much-improved carry-over storage in statewide reservoirs, the Department of Water Resources (DWR) announced on January 21, 2011 that it is increasing the allocation of State Water Project (SWP) supply to 60 percent of contract amounts. The Bureau of Reclamation (USBR) announced on January 18, 2011 its initial allocation of 75 percent of historic use for Central Valley Project (CVP) municipal and industrial (M&I) contractors and 45 percent of contract amounts for agricultural contractors south-of-the-Delta. These initial allocations are subject to change as the water year progresses.

Despite the early precipitation and runoff in the local watersheds, local surface water supplies have been reduced because of the loss in water district reservoir storage capacity due to regulatory restrictions to address seismic concerns. As illustrated in Figure 2-2.1, water levels at Anderson Reservoir, the largest water district-owned surface reservoir, have been kept low, resulting in loss of almost half of its original storage capacity.


SAN JOSE MERCURY NEWS

Study: Santa Clara County's Anderson Dam at risk of collapse in major earthquake

Posted: 10/13/2010 08:14:51 PM PDT
Updated: 10/14/2010 11:18:27 AM PDT

Anderson Dam safety concerns

Because of earthquake concerns, the Santa Clara Valley Water District plans to keep Anderson Dam water level no more than 57 feet below its crest. Currently, the water level is at 60 feet below the crest, which amounts to 48,806 acre-feet (the dam's capacity is 90,000 acre-feet, or 29 billion gallons).

Figure 2-2.1 10/14/2010 Mercury News Article

Table 2-2.1 reflects the probable range of local and imported surface water supplies the water district currently expects in calendar year 2011. In conjunction with surface water supplies, groundwater reserves are managed to supplement available supplies during dry periods and to ensure that there are adequate supplies to meet current and future demand. The strategy will be continuously updated throughout the year to account for operations to-date and real-time conditions.

Table 2-2.1 Projected Calendar Year 2011 – Range of Surface Water Supply

Projected Calendar Year 2011Supply in Acre-Feet Based on 1/21/11 Forecast		
	Average Year	Dry Year
Imported Water	172,000 - 189,000	172,000
Local Surface Water	37,000	14,000
Total	**209,000 - 226,000**	**186,000**

Long-Term Projected Demand and Water Supply

The Association of Bay Area Governments (ABAG) projected in 2009 that the population of the county will increase to 2,431,300 by the year 2035 compared to the beginning of year 2010 population of 1,880,900. This increasing population and projected significant job growth will increase demand for water. Overall, countywide water demand is projected to increase by about 80,000 acre-feet or 20 percent over the next 25 years, compared to year 2007 water use, taking into account implementation of planned water conservation programs. The recent reduction in water use county-wide is expected to result in lower near term demand but not in significant changes in longer term demand projections. These preliminary demand projections will be further refined as the water district and the water retailers finalize their respective 2010 Urban Water Management Plans (UWMP). The increased demand by year 2030 to 2035 will need to be met through a combination of new supply development and additional demand reduction measures, to be identified in the current master planning effort.

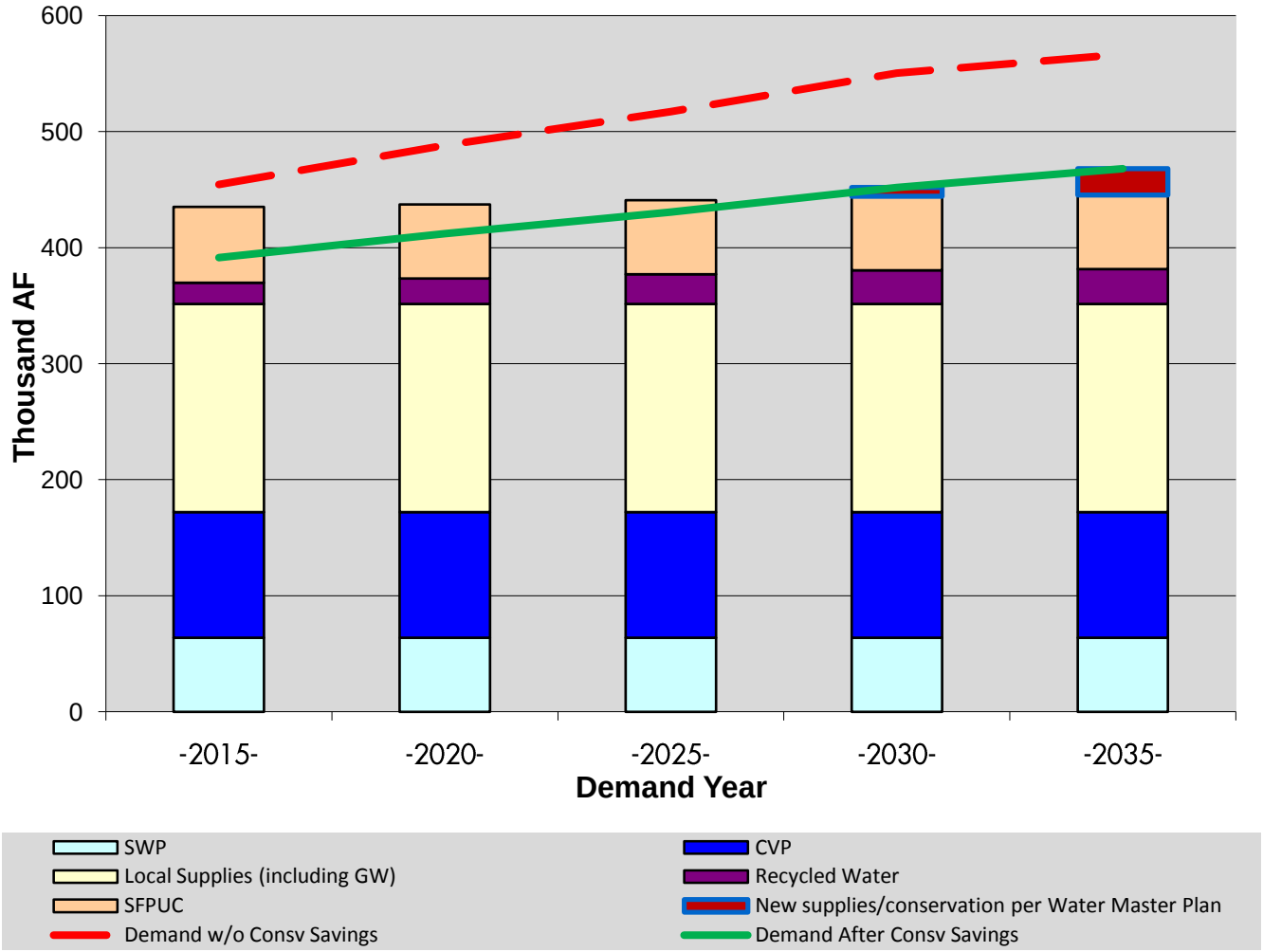
The water district and most major retail water providers partner in regional implementation of a variety of water use efficiency programs to permanently reduce water use in the county. As shown in Figure 2-2.2, the year 2035 demand with currently planned conservation programs in place is projected to be approximately 468,000 acre-feet.

The long-term savings goal in the water district board-adopted 2005 UWMP is 98,500 acre-feet per year in water savings by 2030. Additionally, recent legislation (SBx 7-7) requires all retail water agencies in the state to reduce per capita water use 20 percent by 2020. To achieve these aggressive long-term goals, the water district implements nearly 20 different ongoing water conservation programs that use a mix of incentives and rebates, free device installation, one-on-one home visits, site surveys, and educational outreach to reduce water consumption in homes, businesses and agriculture. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions.

Through June 2010, the water district has achieved 50,600 acre-feet/year of conservation savings to stay on pace to reach its long-term goal of 98,500 acre-feet per year by 2030. Although many of the methodologies are still being finalized for the 20 percent by 2020 calculations, if the water district remains on pace to meet the goal of 98,500 acre-feet per year by 2030, the region as a whole should meet the state's goal of 20 percent reduction in per capita water use by 2020. Due to the current economic climate, reductions have been made to the conservation budget in FY 2010–11 and more are expected in FY 2011–12. These reductions may cause the water district to fall off pace from meeting the long-term goals, although it can be made up in future years through redoubled efforts. In addition, approximately 30,000 acre-feet of the year 2035 demand will be supplied by recycled water.

Since the 2005 UWMP, imported water deliveries from the State Water Project (SWP) and federal Central Valley Project (CVP) have been negatively impacted by significant restrictions on Delta pumping required by the biological opinions issued by the U.S. Fish and Wildlife Service (December 2008) and National Marine Fisheries Service (June 2009), as well as altered hydrologic conditions due to climate change.

Figure 2-2.2 Normal Year Supply & Demand Comparison, Santa Clara County (Preliminary)



Notes:

(1) All values are preliminary. Final values will be incorporated into the water district's 2010 Urban Water Management Plan to be submitted to the California Department of Water Resources by July 1, 2011.
(2) Includes Department of Safety of Dams reservoir operations restrictions for Almaden, Anderson, Calero, Coyote and Guadalupe. However, the more restrictive operation at Calero (5,670 acre-feet) is not yet included. Assumes repairs to Anderson will be completed and reservoir may be operated at full capacity starting in 2025.
(3) Note that demand projections included in this figure are based on preliminary projections from water retailers and are for long term water supply planning purposes rather than revenue projection purposes. As such, values for total demand in 2015 do not equal the demand projections included in the financial section of this report.
(4) Demands after conservation savings are based on the total water conservation program water savings goal and includes both urban and agricultural conservation using 1992 as the base year.
(5) SWP and CVP supplies based on State Water Project Delivery Reliability Report 2009 and associated water resources simulation model (CALSIM II) results.
(6) Assumes no additional imported supplies are secured through transfer, spot market or options.
(7) Includes Semitropic participation level of 350 thousand acre-feet (TAF).
(8) SFPUC Hetch-Hetchy supplies based on Interim Supply Allocations adopted by SFPUC in December 2010.
(9) Recycled water projections based on estimates provided by county recycled water producers during the preparation of UWMP 2005 and preliminary UWMP 2010.

In the 2009 SWP delivery reliability report, issued in August 2010, there are greater reductions in water deliveries on average when compared to previous reports issued in 2005 and 2007. The average annual SWP delivery is at 60 percent for current and projected future conditions. Over multiple-year dry periods, the average annual SWP delivery is around 35 percent. In addition to the impact of reduced annual supplies, the water district could sustain cumulative impacts from reduced supplies in the average and wetter years than historically were available for the water district to store either locally or out-of-county as reserves for the drier years. These updated imported water delivery estimates will be incorporated into the 2010 UWMP which is currently being prepared by staff and will be submitted to the State Department of Water Resources by the July 1, 2011 deadline. The water supplies and demands depicted in Figure 2-2.2 reflect assumptions currently utilized in the draft 2010 UWMP including imported water allocations based on the 2009 SWP delivery reliability report.

The "normal" year for the purposes of the 2010 UWMP is a year in the historical sequence (1922 – 2003) that most closely represents median runoff levels and patterns. Note that the historical sequence utilized for the water district's 2005 UWMP was limited to 1967 through 1994, a period with lower average annual supplies compared to the 1922 – 2003 time period. The normal year analysis uses a specific year to approximate supplies available on an annual basis excluding carryover storage to identify the normal year shortage, if any. Note that groundwater is used in all year types (including years where the total supplies exceed total demands) for distribution, storage and treatment. Year 2002 was selected as the "normal year" since it is close to the median, essentially equal to the average and falls within the period after 1967 where actual rather than correlated data is available. The selection of a "normal year" does not match the average year for all supply sources, but is the "best fit" for the hydrologic years included in the modeling analysis.

The preliminary results shown in Figure 2-2.2 indicate that annual supplies begin to fall below projected demands under normal year conditions between the years 2025 and 2030. The model shows that carryover supplies between the years 2020 and 2025 begin to be depleted, requiring increased calls for water shortage contingency actions such as short term behavioral water use reduction. These calls would increase in magnitude and frequency with time, unless a combination of new supplies and infrastructure, increased long term conservation, and changes in operational strategies were implemented. Shortfalls are identified for the water district as a whole. The analysis performed for the UWMP does not identify shortfalls in specific areas.

Multiple dry year scenario analysis is useful particularly in the evaluation of carryover storage. Evaluating the availability of the water supplies in Santa Clara County requires an understanding of the driest periods that can reasonably be expected to occur. Over the more than 120 years of recorded rainfall, seven major drought events have occurred. In dry and multiple dry years analysis, the use of groundwater reserves and the indicated shortage is highly dependent on the assumed initial groundwater storage at the beginning of the run and leading into the dry year period under analysis and the hydrologic sequence used in the model.

Water district modeling results also indicate that the water supply system in the county is more vulnerable to successive dry years, such as those that occurred in 1928-1934 and 1987-1992. Multiple dry year periods deplete water storage reserves in local and imported supply reservoirs and in the groundwater basins. Multiple dry years (such as the 1987-1992 drought) pose the greatest challenge to the water district's water supply. Although the supply in each year may be greater than in a single very dry year, as droughts linger, storage reserves are relied on more and more.

2-3 CONCLUSIONS, FINDINGS AND CHALLENGES TO FUTURE WATER SUPPLY AVAILABILITY

Unmet Demand

The water district updates its Urban Water Management Plan (UWMP) every five years in compliance with the California Urban Water Management Planning Act. Work thus far on the 2010 UWMP concluded that the water district cannot meet demands through 2030 without significant investments to protect and augment the water district's current mix of water supplies. New restrictions on pumping from the Delta, local storage, and operational constraints, combined with continued increases in water demands, further emphasize the need for additional investments to protect and augment supplies. Investments are necessary to protect existing water supply sources and infrastructure. In addition, the water district also must make investments in a mix of new all-weather supplies, storage, dry-year transfers or option agreements and maximize opportunities for water conservation.

Risks and Uncertainties

Hydrologic, institutional and regulatory risks and uncertainties influence the projections of both local and imported water supplies and the anticipated reliability of those supplies. The water district identified and analyzed risks and uncertainties as part of the Integrated Water Resources Planning (IWRP) Study – 2003. Risks evaluated include random occurrences of hazards and extreme events, climate change, more stringent water quality standards, fisheries protection measures, no expanded capacity of the SWP Banks pumping plant, and demand growth greater than projected. Results of this analysis indicated that Delta levee failure risk and climate change are among the water district's top risks to water supply. Most of the risks and uncertainties have materialized since the completion of the 2003 IWRP.

Decrease in Supply

Projected imported supplies have decreased as a result of actions to protect fisheries in the Delta and the consequences of climate change. In response to the trend of Delta ecosystem decline and reduced water supply reliability, the water district has been working with state and federal resource agencies, conservation organizations, water agencies, local agencies and other interested parties to develop a comprehensive Bay Delta Conservation Plan (BDCP). A draft BDCP was released in December 2010, which outlines a strategy to help reverse the decline of the Delta ecosystem and identified water conveyance facilities that can help secure water supplies for 25 million Californians. The BDCP planning process needs to continue to refine critical and controversial elements of the draft plan and to work towards the issuance of a draft Environmental Impact Report and Statement, scheduled for late 2011.

Infrastructure Investment Needs

The water district manages and addresses risks and uncertainties by building and maintaining a diversified portfolio of water supply sources and programs. This portfolio of existing supplies and new water supply investments is intended to meet future water demands. This portfolio will be reviewed and updated in a Water Supply and Infrastructure Master Plan scheduled for completion in 2012.

The major challenge to future water supply availability is how best to protect and augment existing water supply assets such as groundwater and surface water resources and the built infrastructure. As shown in Figure 2-2.2, it is paramount to ensure the continuing reliability and sustainability of existing supplies,

since they constitute an irreplaceable supply foundation. The water district needs to continue to be vigilant in protecting the groundwater basins from overdraft and contamination, mitigating the diminishing imported and local supplies, and maintaining and replacing the aging water supply infrastructure. These infrastructure investment needs will be further discussed in chapter 3 of this report.

3-1 ACTIVITIES TO PROTECT AND AUGMENT WATER SUPPLIES OF THE DISTRICT

In June 2010, the water district's Board of Directors adopted groundwater production charges and other water charges to finance a program of activities to protect and augment water supplies of the water district. The program, to be undertaken in fiscal year FY 2010–11, is comprised of activities and service functions in the areas of operations, maintenance and construction, as illustrated in Table 3-1.1. These activities are designed to work together to meet water district board-adopted end goals and policies as well as to provide benefits to the community.

Table 3-1.1 Program Activities to Manage and Provide a Sustainable Water Supply

Sources	Activities to Protect & Augment Water Supplies		End Goals & Benefits
		Services and Functions	
• Sources of Water Supplies • Revenue from groundwater production charges & other sources of funding	Operation	• Planning & development • Water purchases • Transmission • Treatment • Distribution • Storage • Recharge • Conservation, water recycling & desalination • Regulatory compliance and mitigation	• Reliable, clean water supply for current and future generations • Delivery of reliable high quality drinking water • Sustainable water supply through integrated water management • Assets and resources managed for efficiency and reliability • Healthy, safe and enhanced quality of living in Santa Clara County
	Maintenance	• Surface & ground water resources protection & management • Asset protection & management	
	Construction	• Capital improvement • Infrastructure management	

The FY 2010–11 groundwater production charges were established in accordance with the FY 2010–11 budget[1] approved by the water district board. The groundwater production charges were the same as those adopted in the two previous fiscal years and reflected further cuts in internal costs and operational changes to constrain costs and streamline business operations.

Revenue from groundwater production charges and treated water charges constituted the majority of funds needed to finance the operations costs of the Water Utility. Almost a third of the operating budget is needed for imported water purchases to augment local supplies. About a quarter of the operating budget is needed to provide treated water to augment groundwater supply in meeting water demand. The balance is used to provide program services including conjunctive management and protection of

[1] The budget document is available on the district website: www.valleywater.org

surface and ground water resources, operation and maintenance of facilities, water conservation, planning and development of recycled water and other alternative sources of supply, as well as administrative and support services.

Water district groundwater and treated water use continued to decline in FY 2009–10 by about 12 percent, compared to the previous fiscal year, due to the economic recession, above average precipitation and drought water use reduction measures. The water district made reductions to the FY 2010–11 operating budget to compensate for the lowered water revenue and an uncertain future.

Nevertheless, the water district continued to operate a full groundwater recharge program and met treated water demand with no water quality violations. Water conservation program services[2] and outreach activities were heightened in 2010, as part of the water shortage contingency action plan implementation. The asset management program and maintenance activities continued, including work at the water district's water treatment plants, pipelines, pump stations, as well as seismic stability evaluations at Anderson, Calero, Guadalupe, Almaden, Lenihan and Stevens Creek dams. There was no interruption in delivery of water supplies despite numerous shutdowns of the South Bay Aqueduct and other water district facilities. To cap off the historic agreement with the cities of San Jose and Santa Clara on joint recycled water development, construction of the Advanced Recycled Water Treatment Plant began in October 2010. Water district participation in the Delta planning processes to protect and improve imported water reliability culminated with the completion of the draft Bay Delta Conservation Plan in December 2010.

3-2 FUTURE CAPITAL IMPROVEMENT, OPERATING AND MAINTENANCE REQUIREMENTS

For FY 2011–12 as well as the decades ahead, the highest priority work of the water district's Water Utility is to implement a program of activities to ensure reliable water supplies both now and in the future, to protect local surface and ground water supplies, and to meet treated water quality standards. This program of operations, maintenance and capital improvement activities will require continued funding from groundwater production charges and other sources of revenue, as described in Section 4 of this report.

The proposed FY 2011–12 operations and capital programs, as shown in Tables 4-5.1 and 4-5.2, continue to emphasize activities to protect and maintain existing water supplies and assets and to plan for contingencies due to both hydrologic uncertainties and regulatory restrictions on imported and local supplies. The proposed programs, if funded accordingly, will enable the Water Utility to provide reliable water supplies in the next year as well as in the future.

The current capital program is largely composed of asset renewal and management projects. This underscores the importance of protecting and maintaining existing water supplies and assets, as these provide the foundation for meeting current and future supply needs. In addition, the water district is developing a master plan to address future supply and infrastructure needs. Some highlights of the proposed FY 2011–12 capital programs are listed next.

[2] The annual Water Use Efficiency Program Year End Report contains a complete description of actions taken by the district and the community in achieving water conservation goals. The report can be found at: www.valleywater.org.

- Seismic evaluations of seven water district dams, and the resulting seismic retrofit of Anderson Dam
- A facility renewal program at the Rinconada Water Treatment Plant to rehabilitate several critical treatment plant systems and facilities
- Rehabilitation and cathodic protection of raw and treated water pipelines to ensure future pipeline reliability
- Improvements to diversion dams to improve recharge operations, reduce flooding risk, and improve staff safety.

A number of asset renewal and management activities, both capital and operating, will continue to be deferred until complete technical information or sufficient financial resources are available. The dam seismic stability evaluations and resulting potential retrofits are one such project. The water district is currently investigating the adequacy of dam seismic stability, and then developing conceptual options for seismic retrofits (where needed) at Anderson and other dams. Figure 3-2.1 illustrates recent seismic stability evaluation activities at Calero Dam. The real scope and costs of seismic stability retrofits will be unknown until the studies are completed, and planning conducted for individual dam retrofits.

Figure 3-2.1 Seismic Stability Evaluation at Calero Dam

For any dams requiring a seismic retrofit, a whole site evaluation including spillway and freeboard adequacy and outlet condition will be needed. This may be a significant driver in capital program scope and costs.

With operating restrictions on a number of water district dams due to seismic deficiencies or questions about seismic adequacy, there may be impacts to current and future operating budgets such as the need to purchase additional water because of an inability to capture and utilize local runoff or store imported water.

Another potentially large impact to future operating and capital budgets is the cost to implement the Three Creeks Habitat Conservation Plans[3] (HCP) and the Santa Clara Valley Habitat Plan (Valley HP).

[3] The Endangered Species Act (ESA) is a federal law to ensure the conservation of threatened and endangered plants and animals and the habitats in which they are found. The ESA prohibits "take" of listed species through direct harm or destruction or adverse modification of designated critical habitat of such species. In the 1982 ESA amendments, Congress authorized the federal ESA implementing agencies, U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service, through the Secretary of the Interior, to issue permits for the "incidental take" of listed species prior to permit holders proceeding with an activity that is legal in all other respects but would result in the incidental taking of a listed species. Prior to issuance of "take" permits, permit applicants are required to design, implement, and secure funding for a conservation plan that minimizes and mitigates harm to the impacted species during the proposed project. That plan is commonly called a Habitat Conservation Plan (HCP). HCPs are legally binding agreements between the U.S. Secretary of the Interior and the permit holder.

The Three Creeks HCP grew out of the 1996 water rights complaint and subsequent Fish and Aquatic Habitat Collaborative Effort (FAHCE). The resource agencies, including NOAA Fisheries Service, United States Fish and Wildlife Service and state Department of Fish and Game, requested that the Three Creeks HCP be expanded to include all surface water operations. FAHCE stakeholders also encouraged the water district to add dam maintenance and seismic safety retrofits in Stevens, Coyote and Guadalupe watersheds to ensure that the reservoir facilities required to support the FAHCE streamflow program were in good working order for the permit term. The water district is the sole applicant for the Three Creeks HCP which is focused on aquatic species.

The Valley HP is a separate joint effort with the County of Santa Clara, the Valley Transportation Authority and the cities of San Jose, Morgan Hill and Gilroy, for the purpose of creating a conservation plan for most of the Guadalupe and Coyote watersheds, and the entire Pajaro watershed within Santa Clara County. The Valley HP focuses on terrestrial species. The Valley HP was released for public comment in December 2010. The water district board and all the elected officials from partner agencies are scheduled to approve the final plan in September 2011. Permits from regulatory agencies are expected to be issued in early 2013.

Together, the two plans, if approved and implemented, will provide the water district with 50 years of species conservation and incidental "take" coverage pursuant to the federal and state Endangered Species Acts for 26 listed species for the water district's water supply and flood control programs. In February 2010 fish were deleted from the Valley HP. In the north county, the water district would still receive ESA take coverage for fish through the Three Creeks HCP. In the south county, ESA take coverage for fish would need to be developed through implementation of several possible mechanisms available to the water district.

Although the Three Creeks HCP and Valley HP are part of an essential strategy for ESA take coverage for a number of critical water district water supply and flood management activities, implementation of both plans will be a large financial commitment on the water district for decades to come in capital, operating and maintenance budgets. Costs have been estimated for both plans, but have not been completely integrated into the groundwater production charge projections because of crediting issues between the two plans that need to be worked out. In addition, the mitigation fees for the Valley HP are pay as you go, so costs will vary depending on how much of the covered work is actually carried out. Because HCPs streamline the ESA permitting, the water district will save substantial costs related to permit processing. ESA permitting for fisheries in the South County will require additional costs that are unknown at this time.

The California Endangered Species Act (CESA) is the state equivalent of the federal ESA. It states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. CESA also allows for take incidental to otherwise lawful development projects. The state Department of Fish and Game is the CESA implementing agency, authorized to issue permits and memorandum of understanding.

4-1 INTRODUCTION

This section summarizes the recommended charges for FY 2011–12 and the multi-year financial analysis that serves as the foundation for the recommended groundwater production charges in each zone. The major sources of revenue for the Water Utility are from the imposition of charges on groundwater production and from contracts for the sale of treated surface water produced by its three treatment plants. The water district also receives revenue from property tax, interest earnings, grants, capital reimbursements and other sources. The water district assesses the need for groundwater production charges annually and, in accordance with state law, prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements.

The Rate Setting Process

According to Section 26.3 of the District Act, proceeds from groundwater production charges can be used for the following purposes:

1. Pay for construction, operation and maintenance of imported water facilities
2. Pay for imported water purchases
3. Pay for constructing, maintaining and operating facilities which will conserve or distribute water including facilities for groundwater recharge, surface distribution, and purification and treatment
4. Pay for debt incurred for purposes 1, 2 and 3.

The work of the water district is divided into projects. Every project has a project plan which is prepared by the project manager. The project plan is a detailed description of the project including objectives, milestones, and an estimate of resources needed to deliver the project. To ensure compliance with the District Act, each project plan contains a justification as to whether or not groundwater production charges can be used to pay for the activities associated with it. The financial analysis presented in this report is based on these project plans.

Resolution 99-21[1] guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to prevent the over use or under use of the groundwater basin. Consequently, staff is very careful to recommend pricing for groundwater production charges, treated water charges, surface water charges and recycled water charges that work in concert to achieve the effective use of available resources.

This year's rate setting process will be conducted consistent with Proposition 218's requirements for property-related fees for water services, although the applicability of Proposition 218 to the groundwater production charge is a subject currently before the courts. The water district maintains that the groundwater production charges are not legally subject to those requirements. Whether legally bound or not, the water District is committed to increasing the transparency of its groundwater production charge setting process.

Last year, the water district implemented a formal protest procedure as provided for in Proposition 218's requirements for property-related fees for water services. The results of that procedure were that in the North

[1] Resolution 99-21 can be found at www.valleywater.org/Services/2010-11ChargeSettingProcess.aspx

County Zone W-2, less than 5.1 percent of well operators or property owners protested the proposed groundwater production charges, while in the South County Zone W-5, less than 9.7 percent of well operators or property owners protested. FY 2011–12 will be the second year in which the process includes a formal protest procedure to allow well operators and property owners to decide whether the Board may authorize an increase to the existing groundwater production charges. As in the past, the board will continue to hold public hearings and seek input from its advisory committees and the public before rendering a final decision on groundwater production charges for FY 2011–12.

Last year, the water district engaged Raftelis Financial Consultants, Inc. (RFC) to review the water district's cost of service and rate setting methodology used to calculate groundwater production charges for fiscal year (FY) 2010–11. RFC has conducted over 600 rate and financial planning studies for water and wastewater utilities across the country. Specifically, RFC reviewed the cost of service and financial planning model developed by the water district to calculate groundwater production charges for FY 2010–11. RFC reviewed the water district's rate setting methodology for consistency with industry standards, best practices, and legal considerations such as Proposition 218, the District Act, and Resolution 99-21. The methodology used to calculate groundwater production charges for FY 2010–11 is detailed in RFC's report titled "Review and Validation of the Santa Clara Valley Water District's Cost of Service and Rate Setting Methodology for Setting FY 2011 Groundwater Production Charges"[2]. The report demonstrates that the water district developed groundwater production charges consistent with cost of service principles and legal considerations including Proposition 218, the District Act, and Resolution 99-21. The water district will use the same cost of service methodology for the FY 2011–12 rate setting process.

This year, the water district engaged RFC and the water resources engineering firms of Hydrometrics Water Resources and Carollo Engineers to further analyze and quantify the conjunctive use benefit of treated water to groundwater and surface water customers. In addition, RFC analyzed the benefits of agricultural water usage to municipal and industrial users. This report titled "Report Documenting the Reasonableness of the Conjunctive Use Benefit of Treated Water to Groundwater and Surface Water Customers and the Benefit of Agricultural Customers to Municipal & Industrial Customers"[3] provides further support and justification for the water district's cost of service methodology.

4-2 THE GROUNDWATER PRODUCTION CHARGE RECOMMENDATION FOR FISCAL YEAR 2011–12

Last year, FY 2010–11, the board chose to hold groundwater production charges flat in both zones of benefit for a third consecutive year. In the North County Zone W-2, the board adopted a $520 per acre-foot groundwater production charge for non-agricultural water, $16.50 per acre-foot for agricultural water, and $620 per acre-foot for contract treated water. In the South County Zone W-5, the board adopted a $275 per acre-foot groundwater production charge for non-agricultural water, and $16.50 per acre-foot groundwater production charge for agricultural water. To hold charges flat for three years, 82 positions have been eliminated district-wide over the past three years, discretionary reserves have been drawn down to minimum per policy, temporary staff and overtime have been reduced significantly, and some projects have been canceled or delayed.

However, like other water agencies statewide, lower water usage due to weather patterns and economic recession have significantly impacted revenues. Despite a fourth straight year of cost reductions, staff recommends an

[2] The initial RFC report can be found at www.valleywater.org/Services/2010-11ChargeSettingProcess.aspx

[3] The second RFC report can be found at www.valleywater.org/Services/2011-12GroundwaterChargeProcess.aspx

increase to the groundwater production charges for FY 2011–12. In the North County, staff recommends a 9.4 percent increase, or $569 per acre-foot groundwater production charge for non-agricultural water; 3.6 percent increase, or $17.10 per acre-foot for agricultural water; 7.9 percent increase, or $669 per acre-foot for contract; and 8.6 percent increase or, $619 per acre-foot for non-contract treated water. The average household would experience an increase in their monthly bill of $1.69 or about 6 cents a day.

In the South County, staff recommends a 3.6 percent increase to both non-agricultural and agricultural water. This results in a $285 per acre-foot groundwater production charge for non-agricultural water, and $17.10 per acre-foot groundwater production charge for agricultural water. The surface water master charge is also proposed to increase by 3.6 percent, from $11.75 per acre-foot to $12.17 per acre-foot. The average household would experience an increase in their monthly bill of $0.34 or about 1 cent per day.

Figure 4-2.1 illustrates the multi-year groundwater production charge projection. It reflects a range of potential groundwater production charges over the next ten years depending on the level of service to be provided. The high end of the range (line immediately above the shaded areas) represents the groundwater production charges required to fund all of the operations and capital projects identified by staff to meet the board's Ends Policies over the next few years. The potential impacts of not funding the high end of the range include increased risk of (1) service interruptions, (2) higher corrective maintenance costs to repair facilities that have not been well maintained and (3) reduced ability to respond to drought. While staff has identified as many projects as possible, there are initiatives and/or potential future uncertainties that could result in the identification of additional capital or operations projects that are not reflected in the high end of the range.

The lower end of the range (line immediately below the shaded areas) represents staff's recommended groundwater production charges for FY 2011–12 and the corresponding future trajectory based on the assumption that operating services will either continue at or below the level budgeted in FY 2010–11.

Figure 4-2.1 Ten Year Projection

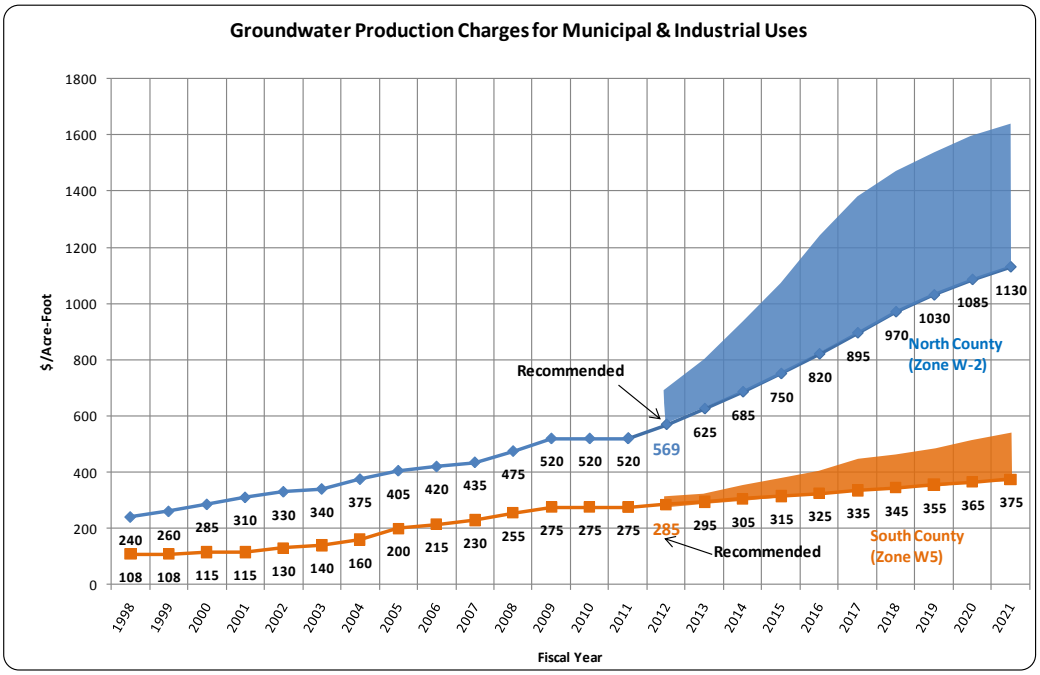


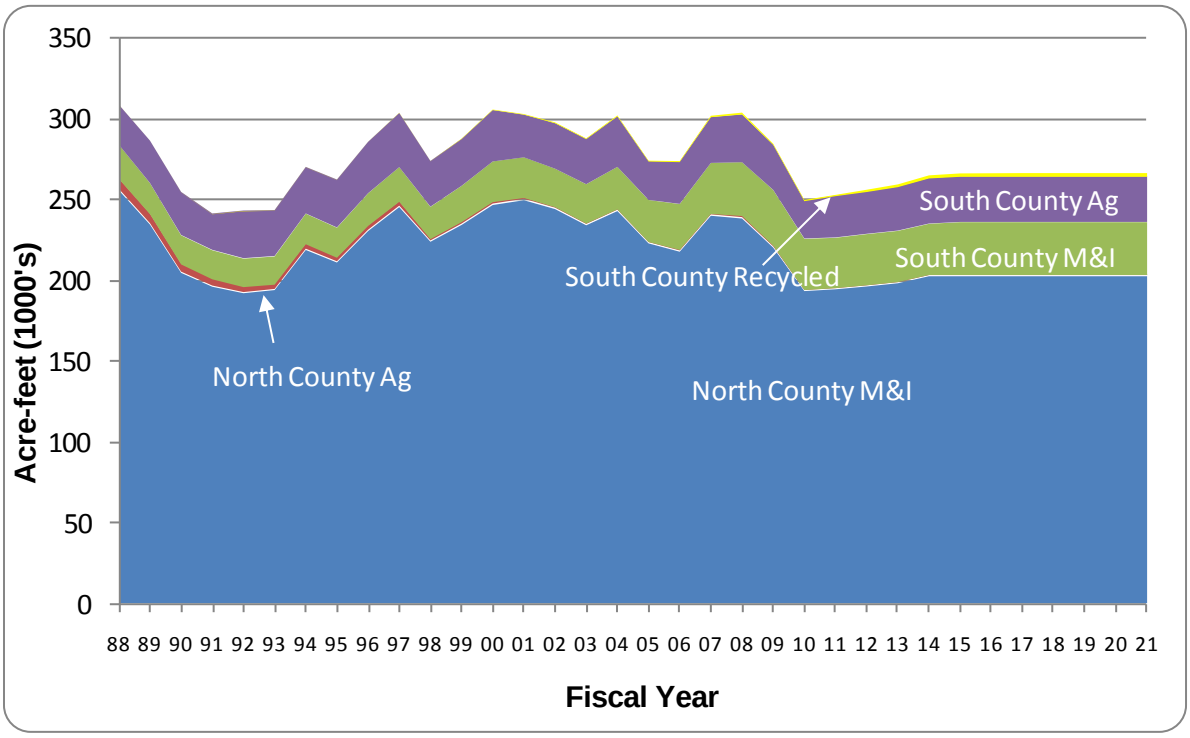
Table 4-2.1 shows groundwater production and other charges in fiscal years 2009–10 and 2010–11. The final column contains the recommended groundwater production charges for FY 2011–12, which are in accordance with the pricing policy described in Resolution 99-21.

Table 4-2.1 Summary of Charges (Dollars Per Acre-Foot, $/AF)

	Dollars Per Acre Foot		
	FY 2009-10	FY 2010-11	Recommended FY 2011-12
Zone W-2 (North County)			
Groundwater Production Charge			
Municipal & Industrial	520.00	520.00	569.00
Agricultural	16.50	16.50	17.10
Zone W-5 (South County)			
Groundwater Production Charge			
Municipal & Industrial	275.00	275.00	285.00
Agricultural	16.50	16.50	17.10
Recycled Water Charges			
Municipal & Industrial	275.00	275.00	275.00
Agricultural	41.50	41.50	41.50
Zone W-2 (North County)			
Basic User Charge	520.00	520.00	569.00
Treated Water Surcharge			
Contract	100.00	100.00	100.00
Non-contract	150.00	50.00	50.00
Total Treated Water Contract Charge	620.00	620.00	669.00
Total Treated Water Non-contract Charge	670.00	570.00	619.00

Figure 4-2.2 illustrates historical and projected water district water use, which is a key driver of the water district's water revenue. The projected water district water use for FY 2011–12 is based on current water usage trends. For FY 2011–12, the total water district water use projection is roughly 3 percent higher than the FY 2009–10 actual at 257,000 acre-feet per year. Water use is projected to ramp up to roughly 260,000 acre-feet by FY 2012–13 and then to 265,000 by FY 2013–14.

Figure 4-2.2 Historical and Projected Water District Water Use



4-3 FINANCIAL OVERVIEW OF THE WATER DISTRICT

The water district uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Fund accounting allows government resources to be segregated and accounted for according to their intended purposes. Accounts related to activities of the Water Utility are segregated into the Water Utility Funds comprised of the Water Utility Enterprise Fund and the State Water Project Fund. For the Water Utility Enterprise Fund, revenue accounts include: groundwater production, treated water, property taxes, interest earnings, reimbursements, grants and other. Cost accounts include both direct and indirect costs associated with Water Utility projects and activities. The State Water Project Fund accounts specifically for State Water Project Tax revenue and State Water Project contractual costs (Note that State Water Project Tax revenue can only be spent on State Water Project contractual costs). Table 4-3.1 shows an overview of the funds at the water district including the Water Utility Funds and the estimated revenues, costs and reserves for FY 2011–12 for each fund. Throughout this report, the term "Water Utility" or "Water Utility Enterprise" refers to the combination of the Water Utility Enterprise Fund and the State Water Project Fund.

Table 4-3.1 FY 2011–12 Projected Funds Analysis

	Water Utility Funds			
	Water Utility	State Water	Watershed	Administration
(Millions $)	Enterprise Fund	Project Fund	Funds	Funds
Revenue[1]	159.6	17.0	133.6	5.1
Interfund Transfer	2.6	0.7	(1.5)	(1.8)
Ops Costs & Xfers	(107.8)	(19.7)	(54.3)	(54.9)
Debt Svc	(16.3)	-	(15.7)	(0.8)
Capital	(70.0)	-	(87.7)	(5.0)
Debt Proceeds	24.0	-	-	-
Intra-District Reimb.[2]	-	-	-	55.4
Balance	**(7.9)**	**(2.0)**	**(25.7)**	**(2.0)**
Reserves				
Restricted	22.8	-	88.5	-
Designated	42.2	-	39.0	7.9
Designated Liability	5.9	-	-	12.4
Total Reserves	**70.9**	**-**	**127.4**	**20.3**

Notes:

1) Watershed revenue includes $28.5M of capital reimbursements

2) Intra-District Reimbursements represent overhead costs that have been allocated to the Water Utility & Watersheds (included in the operations and capital costs for those funds)

The Watershed Funds are a segregated grouping of funds with separate funding sources (including Benefit Assessments, 1 percent ad valorem property taxes and a special tax) for the purpose of providing flood protection and watershed management. The Administration Funds include the General Fund, the Equipment Fund and the Risk Fund to account for all revenues and expenditures necessary to carry out basic governmental activities of the water district that are not accounted for through other funds. Administration Funds expenditures that are not offset by Administration Funds revenues are allocated to the Water Utility and Watershed funds through an overhead rate at the project level.

4-4 WATER UTILITY FINANCES FOR FISCAL YEARS 2009–10 & 2010–11

Fiscal Year 2009–10

Actual overall revenue for FY 2009–10 was $17.2 million less than the adopted budget. This shortfall was due primarily to lower water usage which equated to $17.2 million reduced water charge revenue. It was also due to $4.7 million of delayed capital reimbursement revenue. These shortfalls were offset by $1.4 million greater than anticipated interest earnings and $2.6 million other revenue related to claims and judgments as well as refunds and adjustments.

Actual operations outlays were $8.5 million lower than adjusted budget. This was driven by $2.6 million of debt service savings for the 2007 taxable water utility certificates of participation, nearly $3.2 million of savings due to reduced operating costs at the three treatment plants, and about $0.8 million in the Imported Water Program.

Unspent capital budget was carried forward to FY 2010–11 consistent with accounting practices.

Fiscal Year 2010–11

Depending on whether it is a dry or wet spring, current estimates for FY 2010–11 show revenue trending between $4.1 million and $14.2 million below budget. This is due primarily to water usage trending below anticipated levels.

4-5 OVERVIEW OF OPERATING AND LONG-TERM CAPITAL PLANS

To develop a charge structure that will support planned work, staff analyzes the immediate needs of the water district as well as anticipated requirements in the years to come.

Operating Outlays

Operations costs are projected to increase at an average of 5.1 percent per year over the next ten years. The increase is driven by anticipated inflation, cost increases associated with employee salaries and benefits, ramping up operations and maintenance associated with the new advanced recycled water treatment facility, and rising costs associated with regulatory requirements.

Table 4-5.1 shows the water district's Water Utility operating program for FY 2009–10, FY 2010–11, and projected for FY 2011–12. Specific details about the programs and projects funded within the water utility can be found in "The 5-Year Water Utility Enterprise Operations Plan[4]." The Water Utility Enterprise strives to implement a program that ensures that treated water quality standards are met and that water supplies are reliable to meet current and future demand.

[4] The 5-year Water Utility Enterprise Operations Plan can be accessed at www.valleywater.org/Services/2011-12GroundwaterChargeProcess.aspx

Table 4-5.1 Operating Budget Summary

		Thousands $			
Cost Center	Ends Policy	Est. Actual FY 10	Adjusted FY 11	Projected FY 12	Description of Cost Centers and Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	76,487	66,288	74,538	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs. Activities include: groundwater level & quality monitoring; groundwater modeling; dams and reservoir operations & maintenance; imported water supply management; long-term Delta issues resolution; operations and maintenance of San Felipe Reaches 1-3, including mechanical, electrical and SCADA; operations planning; water rights protection; Urban Water Management Plan; administration of recycled water agreements, technical studies, recycled water rebates; water conservation technical assistance, financial incentives, outreach and education; environmental planning & compliance; well permitting and destruction; and habitat conservation and mitigation commitments.
Raw Water Transmission Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	8,844	8,049	8,335	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems. Activities include: operations and maintenance of recharge ponds, canals, pipelines & diversions including vegetation management; operations and maintenance of raw water distribution system, including mechanical, electrical and SCADA; raw water corrosion control; environmental compliance support.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	26,169	30,147	31,446	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to retail customers and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts. Activities include: operations and maintenance of 3 water treatment plants; Water District laboratory operations; water quality planning, testing, research, and reporting; operations and maintenance of treated water transmission and distribution system; and recycled water T&D general maintenance.
Administration & General	Support Services	15,758	16,987	18,741	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Activities include: asset protection evaluation and planning; Integrated Water Resources Plan; integrated regional water management plan; water system computer modeling; biodiversity monitoring; urban runoff pollution prevention; programs and activities to mitigate climate change impacts and plan for adaptation strategies; general & division management; performance measures; financial support & water charge setting; customer relations; health and safety training; billing; data maintenance; auditing; meter reading, testing, repair, installation, backflow prevention; emergency services; warehouse and equipment services; real estate services; and ethics & diversity
Other	Cost Adjustments	-	-	(5,565)	Operating cost reductions or adjustments
	Total Program Requirements	**127,259**	**121,471**	**127,495**	

Capital Improvement Plans

The water district constructs, operates and maintains reservoirs, pipelines, recharge facilities, and water treatment plants that are needed to achieve the board's Ends Policies. On an annual basis, the water district conducts a process to plan for capital improvements and identify the resource needs and constraints to implement the projects. The result of this process is board approval of a 5-Year Capital Improvement Program (CIP)[5].

Table 4-5.2 shows the capital projects identified in a preliminary version of the FY 2011–12 CIP and associated expenditures for the next ten fiscal years. The table shows funding almost $765 million (inflated) worth of capital projects between FY 2011–12 and FY 2020–21. A large portion of the capital program is dedicated to asset management of Water Utility Enterprise facilities throughout the county and is based on a program to provide a better basis for identifying long-term capital rehabilitation and replacement needs. Staff has recently developed a validation process as part of the water district's Asset Management Program, to identify if there is a compelling business case for capital projects. The process is currently being tested on a select group of projects before being applied to all projects currently in the water district's 5-Year CIP. Projects will be proposed to move forward into the FY 2012-13 CIP based on the result of the validation process. In the future, all newly-proposed projects will undergo the validation process prior to being proposed for inclusion in the CIP.

A consultant was selected in February 2011 to conduct a performance audit of the water district's Capital Program Services Divisions. The purpose of the audit is to assess the effectiveness and efficiency of the district's capital project delivery system, management of the capital program, and oversight of consultants and contractors, from project initiation through completion of construction and transfer to operations. The audit will be completed in a 4- to 6-month period of time.

[5] The latest CIP can be accessed at www.valleywater.org/Programs/CapitalImprovementProgram.aspx

Table 4-5.2 Capital Improvement Projects – Fiscal Years 2011–12 Through 2020–21

	Planned Funding with Inflation (In Thousands $)						
Name	FY12	FY13	FY14	FY15	FY16	FY 17-21	Total 12-21
SOURCE OF SUPPLY							
Dam Instrumentation*				605	5,899	408	6,912
Bay Area Regional Desalination, Mallard Slough Pilot Plant	8						8
Dam Maintenance Mitigation*	89						89
Dam Safety Program Seismic Stability Evaluation*	2,716	478	198				3,392
Recycled Water Masterplan - Short-Term Implementation*	195						195
Water Efficient Demonstration Garden		20	95				115
South Bay Advanced Recycled Water Treatment Facility	18,424	924					19,348
Pacheco Pumping Plant Regulating Tank Recoating*	2						2
San Felipe Communications Cable Replacement*			1,302	6			1,308
Small Capital Improvements, San Felipe Reach 1*	996	1,020	1,045	1,070	1,096	5,885	11,112
Small Capital Improvements, San Felipe Reach 3*	1,407	1,289	1,320	1,351	1,384	7,522	14,273
Almaden Dam Outlet Works Improvements		743	771	685	1,184	11,746	15,129
Jacques Gulch Restoration	106	90	32	50			278
Calero/Fellows Dike Improvement		461	6,816				7,277
Pacheco Pumping Plant ASD Replacement*	669	1,070	264				2,003
Anderson Dam Seismic Retrofit*	7,373	1,083	10,186	16,124	88,261	2,897	125,924
Central Valley Project Capital Payments*	7,137	7,389	7,650	7,920	8,200	48,203	86,498
Source of Supply Subtotal	39,122	14,567	29,679	27,811	106,024	76,661	293,863
TREATED WATER TRANSMISSION & DISTRIBUTION							
Radio Repeater System Infill - 47%*	0	174	10				185
Water Protection*	131	403					534
Microwave Telecommunications System*	103	21					124
East Pipeline Rehabilitation, Patt to Milpitas PL	728						728
Small Capital Improvements, Treated Water Transmission		1,506	1,067	387	420	2,905	6,285
IRP2 Additional Line Valves				693	853	6,815	8,361
Treated Water Transmission & Distribution Subtotal	962	2,104	1,077	1,080	1,273	9,720	16,217
ADMINISTRATION & GENERAL							
Capital Training and Development*	199	303	330	433	393	1,913	3,572
CIP Development & Admin*	346	530	581	764	693	3,393	6,307
PeopleSoft System Upgrade - 55%*	5						5
Survey-Mgt & Admin*	112	155	169	278	320	1,610	2,644
Real Estate Technical Support*	12	17	18	30	35	176	289
CPSD Management & Support*	1,429	1,992	2,169	3,582	4,117	20,740	34,029
Technical Review Committee*	208	315	343	448	406	1,973	3,694
Capital Healty & Safety Training*	204	311	342	449	408	1,996	3,710
Pipeline Hydraulic Reliability Upgrades - Planning*	139						139
Administration & General Subtotal	2,654	3,623	3,952	5,985	6,371	31,802	54,388

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

Table 4-5.2 Capital Improvement Projects – Fiscal Years 2011–12 Through 2020–21 (Continued)

	Planned Funding with Inflation (In Thousands $)						
Name	FY12	FY13	FY14	FY15	FY16	FY 17-21	Total 12-21
RAW WATER TRANSMISSION & DISTRIBUTION							
South County Pipeline Right of Way Acquisition*	1,043	556					1,599
IRP2 Backup Raw Water Control Center at Almaden*		38	127	805	642		1,612
Alamitos Diversion Dam Improvements			257				257
Coyote Diversion Dam Improvements		582	1,172				1,754
Kirk Diversion Dam & Fish Screen Improvements			1,205	570			1,775
Main & Madrone Avenue Pipelines Restoration*		769	374				1,143
Penitencia Fish Facilities Modifications	340						340
Almaden-Calero Canal Rehabilitation			204	5,751	1,283		7,238
Small Capital Improvements, Raw Water Transmission*	1,156	1,184	1,212	1,241	1,271	6,829	12,893
Stevens Creek Supplemental Water	1,126	2,018	25,361	1,028			29,533
FAHCE Stevens Creek Fish Passage Enhancement - 90%	0	2,324	4,760	3,716			10,800
Ogier Ponds Separation from Coyote Creek*			465	482	2,913	8,634	12,494
Cathodic Protection of USBR-Owned Pipelines*		489	468	3,840			4,797
Raw Water Transmission & Distribution Subtotal	3,665	7,960	35,605	17,433	6,109	15,463	86,235
WATER TREATMENT							
WTP I/O Cards & Trunk Cable Upgrades	179	149					328
PWTP Chemical Systems Upgrade					1,789	268	2,057
PWTP Water Pumps Modifications		286	503	5			794
PWTP Clearwell Recoating & Repair	2,951	21	0				2,972
STWTP Incompatible Materials	354						354
RWTP Chemical System Upgrade	66						66
RWTP FRP Residuals Management	495	14,473	969				15,937
RWTP FRP Primary Electrical System Improvement	852	212					1,064
RWTP FRP Chemical Storage Structure & Pump Valves Upgrades	310	3,210	650				4,170
RWTP Reliability Improvement	321	5,416	1,410	39,314	44,719	11,348	102,528
IRP2 Well Fields	205	212	5,978	5,798	6,012	59,560	77,765
IRP2 Seismic Study and Retrofit of WTP Ops Bldg	5,538	3,432	2,732				11,702
Small Capital Improvements, Water Treatment	1,148	1,175	1,204	1,233	1,262	6,779	12,801
RWTP BL-1 Valve & Vault Replacement				248	1,150	117	1,515
PWTP Washwater Clarification Facility		480	573	6,092			7,145
PWTP Ammonia System Relocation and Upgrades			679	3,418	300		4,397
PWTP Filter Basin Covers		386	666				1,052
PWTP Large Valve Automation		815	150				965
RWTP Filter Polymer System Improvement			208	1,093	97		1,398
RWTP Advanced Treatment						43,682	43,682
Water Treatment Subtotal	12,419	30,267	15,722	57,201	55,329	121,754	292,692
Projected Carryforward*	11,197	10,234					21,431
TOTAL FUNDED	70,020	68,755	86,036	109,510	175,106	255,400	764,826

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

Table 4-5.3 shows the lower priority or deferred capital projects that are not funded under the recommended charges for FY 2011–12. The postponed capital projects total approximately $816 million (inflated) over the next ten years. A higher groundwater production charge projection would be necessary to fund these postponed capital projects.

Table 4-5.3 List of Capital Projects Postponed Indefinitely

	Proposed Funding (In Thousands $)						
Name	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10	Total Years 1-10
SOURCE OF SUPPLY							
Guadalupe Dam Outlet Works Rehab	466	486	770	6,132			7,854
Calero Dam Outlet Works Rehab	348	363	424	4,497			5,632
San Luis Reservoir Low Point Improvement - Design and Construction*	16,633	44,383	47,232	33,101			141,349
Recycled Water Masterplan - Long-Term Implementation*	8,090	112					8,202
Dam Seismic Stability at 7 Dams (Placeholder)*	30,000	30,000	30,000	30,000	30,000		150,000
DHCCP Implementation and Other Delta Projects*	1,000	1,030	10,061	10,363	10,674	58,368	91,496
FAHCE/HCP			20,000	20,000	20,000	40,000	100,000
Full-scale recycled water implementation*			40,000	40,000	40,000	80,000	200,000
Source of Supply Subtotal	**56,537**	**76,374**	**148,487**	**144,093**	**100,674**	**178,368**	**704,533**
RAW WATER TRANSMISSION & DISTRIBUTION							
Valve 906 Low-Flow Bypass	125	31					156
Santa Clara Tunnel Leakage and Pacheco Conduit Dewater*	471	232	2,689				3,392
Church Avenue Diversion*	1,372	429	2,330	65			4,196
Coyote Pumping Plant ASD Replacement	372	428	566	3,153	2,785	2,676	9,980
Coyote Creek Bypass Feasibility	500	600					1,100
Coyote Creek Bypass	150	800	8,200	60,300	100		69,550
Raw Water Transmission & Distribution Subtotal	**2,990**	**2,520**	**13,785**	**63,518**	**2,885**	**2,676**	**88,374**
WATER TREATMENT							
RWTP Waste Stream Separation Modification	108	648	56				812
WTP Filter Backwash Aid	323	1,739	175				2,237
Water Treatment Subtotal	**431**	**2,387**	**231**	**0**	**0**	**0**	**3,049**
TREATED WATER TRANSMISSION & DISTRIBUTION							
Milpitas Pipeline Terminus Valve & Vault	106	123	185	1,251	267		1,932
Treated Water Transmission & Distribution Subtotal	**106**	**123**	**185**	**1,251**	**267**	**0**	**1,932**
ADMINISTRATION & GENERAL							
Winfield Vegetation Improvement*	138	1,925					2,063
Winfield Warehouse Improvement*	220	550	2,530				3,300
Fleet Building Improvements*	481	1,581					2,063
Business Collaboration Platform*	530	89					619
Almaden Campus Office Building*	110	385	1,073	6,298			7,865
ISMP Electronic Document Management System*	22	1,031	909				1,961
Administration & General Subtotal	**1,500**	**5,561**	**4,511**	**6,298**	**0**	**0**	**17,870**
TOTAL UNFUNDED	61,564	86,965	167,199	215,160	103,826	181,044	815,758

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

4-6 FINANCES

Financing and Bond Ratings

To fund the construction of new facilities, the water district has historically relied on both pay-as-you-go financing and long-term debt financing as authorized by the voters in 1984. Capital improvement needs total $765 million (in inflated dollars) for the ten fiscal years 2011–12 through 2020–21. As shown in Figure 4-6.1, the water district will see debt service rise from $16.3 million in FY 2011–12 to just over $51.1 million in FY 2020–21 as a result of periodic debt issuances to fund capital projects. Total outstanding debt (excluding general obligation bonds) is shown in Figure 4-6.2 and is projected to increase from $295 million in FY 2011–12 to $667 million in FY 2020–21. This outstanding debt could be significantly higher if all postponed capital projects were funded. Conversely, the debt could also be reduced if projects are reduced or further external funding is found.

Figure 4-6.1 Projected Debt Service

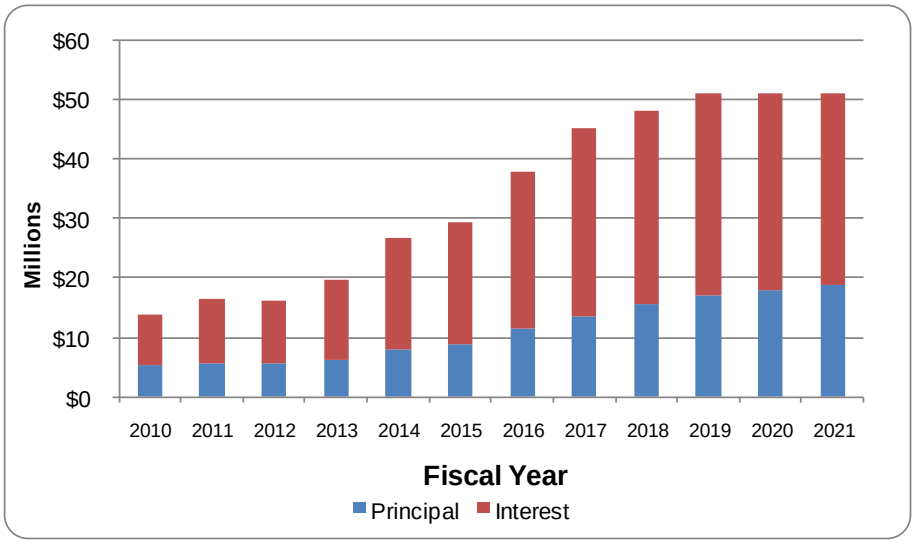
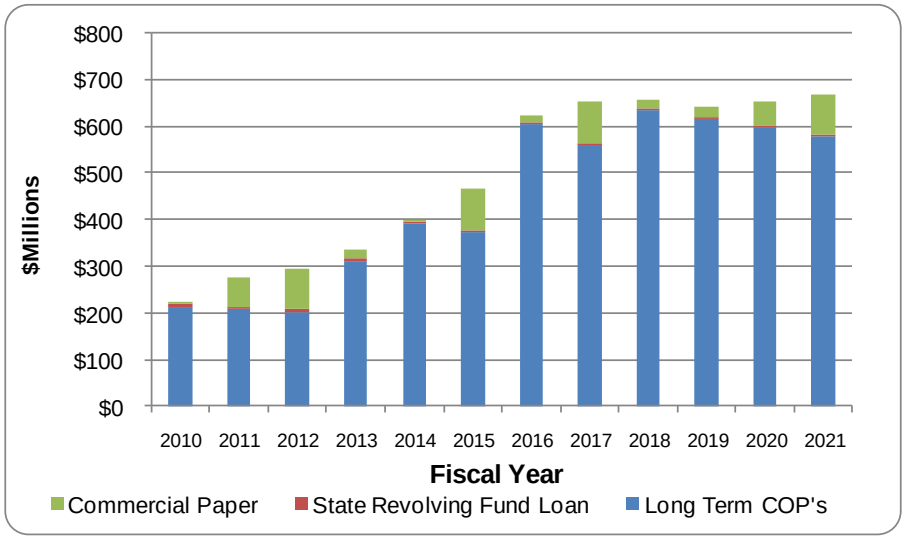


Figure 4-6.2 Projected Outstanding Debt



The water district was upgraded to a rating of Aa2 from Moody's in September 2007 while the Standard & Poor's rating was maintained at AA. These ratings reflect the water district's strong financial position and the highly rated creditworthiness of water district issued securities. The ratings are among the highest for a water-related governmental entity in the state of California, which helps keep interest costs borne by the water district at a minimum.

Water Utility Funds Projected Proforma

Table 4-6.1 shows the projected revenues, expenditures, and reserves over the next ten years for the Water Utility Funds. By financing with a combination of debt, current year revenue, and reserves, the water district is able to meet its capital investment plan. Under the recommended projection, the financial model assumes that discretionary reserves (the operating and capital reserve plus the supplemental water supply reserve) are maintained at minimum per district policy. The minimum per policy for these reserves equates to having just under 3 months worth of Water Utility operating outlays in the bank. These reserves serve several purposes including: to meet cash flow needs; provide emergency funding; and to provide a funding source for future operating and capital needs. The District's reserve policy can be found within the Financial Summaries section of the FY 2010-11 Budget document.[6]

The financial model under the recommended projection reflects a senior Lien Debt Service Coverage Ratio ranging between 1.96 and 2.46 through FY 2020–21. Targeting a ratio of 2.0 or better helps to ensure financial stability and continued high credit ratings.

[6] The FY 2010-11 Budget document is located at www.valleywater.org/About/Finance.aspx.

Table 4-6.1 Ten-Year Water Utility Plan – ($ in Thousands)

	Actual	Adjusted Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2009–2010	2010–11	2011–12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Operating Revenues												
Groundwater Production Charges	$55,189	$50,930	$61,603	$68,205	$74,654	$81,434	$88,382	$95,802	$103,221	$109,224	$114,755	$119,342
Surface & Recycled Water Charges	$919	$2,374	$1,304	$1,456	$1,611	$1,777	$1,948	$2,125	$2,262	$2,377	$2,483	$2,578
Treated Water Charges	$64,157	$67,980	$69,099	$75,036	$84,121	$91,086	$98,587	$106,624	$114,661	$121,091	$126,985	$131,807
Inter-governmental Services	$1,696	$1,169	$2,106	$2,498	$3,218	$3,709	$3,783	$3,867	$3,942	$4,043	$4,116	$4,226
Total Operating Revenue	**$121,961**	**$122,453**	**$134,112**	**$147,195**	**$163,604**	**$178,006**	**$192,700**	**$208,418**	**$224,086**	**$236,735**	**$248,339**	**$257,953**
Non-Operating Revenues												
Property Taxes	$24,241	$22,375	$21,173	$22,757	$24,832	$26,990	$29,154	$32,326	$35,506	$38,693	$41,888	$45,092
Interest	$4,062	$1,989	$1,751	$2,033	$1,969	$2,034	$2,176	$2,307	$2,451	$2,657	$3,350	$4,847
Capital Contributions	$1,602	$6,747	$18,147	$5,115	$1,954	$1,479	$1,241	$1,247	$253	$259	$265	$271
Other	$5,447	$2,331	$1,396	$1,398	$1,401	$1,403	$1,406	$1,409	$1,413	$1,416	$1,420	$1,424
Total Non-Operating Revenues	$35,351	$33,442	$42,467	$31,304	$30,156	$31,907	$33,977	$37,290	$39,622	$43,025	$46,923	$51,634
Total Revenue	**$157,312**	**$155,895**	**$176,579**	**$178,499**	**$193,760**	**$209,912**	**$226,677**	**$245,707**	**$263,708**	**$279,759**	**$295,263**	**$309,586**
Operating Outlays												
Operations	$123,860	$117,413	$123,778	$132,378	$140,093	$145,911	$152,687	$159,778	$166,677	$175,009	$181,655	$191,456
Operating Projects	$3,399	$4,059	$3,717	$3,324	$3,123	$4,037	$7,167	$7,496	$7,585	$7,725	$8,369	$8,031
Debt Service	$13,799	$16,471	$16,286	$19,815	$26,743	$29,382	$37,790	$45,152	$48,152	$51,152	$51,149	$51,150
Total Operating Outlays	$141,058	$137,942	$143,780	$155,517	$169,959	$179,330	$197,645	$212,427	$222,414	$233,886	$241,174	$250,636
Operating Transfers In/(Out)	(269)	159	3,276	3,396	3,511	3,626	3,741	3,857	3,972	4,087	4,202	4,317
Debt Proceeds	0	61,317	24,042	36,092	60,721	77,653	149,396	45,410	8,986	2,788	27,612	31,905
Capital Outlay	(54,537)	(121,358)	(70,014)	(68,755)	(86,035)	(109,510)	(175,106)	(80,853)	(46,346)	(46,909)	(45,503)	(35,790)
Total Other Financing Sources/ (Uses)	(54,806)	(59,882)	(42,696)	(29,267)	(21,803)	(28,231)	(21,968)	(31,586)	(33,388)	(40,034)	(13,689)	433
Balance Avaliable	**(38,553)**	**(41,929)**	**(9,898)**	**(6,285)**	**1,999**	**2,352**	**7,064**	**1,694**	**7,906**	**5,840**	**40,400**	**59,383**
Reserves:												
Restricted Reserves:												
WUE-Restricted Operating Reserve	$12,140	$11,466	$11,982	$12,960	$14,163	$14,944	$16,470	$17,702	$18,535	$19,491	$20,098	$20,886
WUE - Rate Stablization Reserve	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647	$1,647
San Felipe Emergency Reserve	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868	$3,868
Revenue Bond Debt Service Reserve	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889
State Revolving Fund	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401
Total Restricted	$22,945	$22,272	$22,787	$23,765	$24,968	$25,749	$27,276	$28,507	$29,340	$30,296	$30,903	$31,692
Designated Reserves:												
Floating Rate Debt Stabilization	$605	$605	$605	$605	$605	$605	$605	$605	$605	$605	$605	$605
Designated for Operating and Capital	$26,420	$22,873	$23,257	$25,828	$26,223	$27,395	$32,533	$32,595	$39,268	$43,751	$83,144	$141,338
Supplemental Water Supply Appropo.	$8,840	$7,723	$8,123	$8,523	$8,923	$9,323	$9,723	$10,123	$10,523	$10,923	$11,323	$11,723
Currently Authorized Projects	$58,024	$21,431	$10,234	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Designated Reserves	$93,888	$52,633	$42,219	$34,956	$35,752	$37,323	$42,861	$43,323	$50,396	$55,280	$95,072	$153,666
Designated Liability & Other:												
GO litigation liability	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930
Total Designated Liability & Other	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930	$5,930
Total	$122,763	$80,834	$70,936	$64,651	$66,650	$69,002	$76,066	$77,760	$85,666	$91,505	$131,905	$191,288
Debt Service Coverage												
Senior Lien Debt Service Coverage	2.51	1.67	2.13	2.08	2.01	2.19	1.96	1.97	2.13	2.17	2.35	2.46

North County (Zone W-2) Finances

North County (Zone W-2) is generally defined as the portion of the county north of Metcalf Road. North County (Zone W-2) accounts for approximately 80 percent of water district water consumption, but because of higher charges due to higher North County costs, over 95 percent of the Water Utility Enterprise's revenue. As shown at the beginning of the financial section in Table 4-2.1, staff recommends a $569 per acre-foot groundwater production charge for municipal and industrial (M&I) or other non-agricultural water and a $669 per acre-foot charge for contract treated water for FY 2011–12. If adopted, there would be a 9.4 percent increase for groundwater production and 7.9 percent for contract treated water compared to FY 2010–11. The average household would experience an increase in their monthly bill of $1.69 or about 6 cents a day. Customers may also experience additional charge increases enacted by their retail water provider.

Staff proposes a $0.60/AF or 3.6 percent increase to the North County agricultural groundwater production charge, which results in a $17.10 per acre-foot in FY 2011–12, in concert with the South County agricultural groundwater production charge. The resulting agricultural groundwater production charge is 3 percent of the M&I groundwater production charge in North County.

Staff also recommends maintaining the surcharge on treated water delivered under the contracts with retail agencies at $100 per acre-foot. As outlined in treated water contracts, the water district has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called non-contract treated water, "… at such times and such prices as determined by the District." Staff recommends maintaining the non-contract surcharge at $50 per acre-foot for FY 2011–12. Staff anticipates having adequate surface water supplies to meet contract and non-contract deliveries. The proposed surcharges for contract and non-contract water are expected to cause retail customers to have an economic incentive to take treated water over groundwater.

Table 4-6.2 shows the relationship between expenditures and the sources of revenue in North County Zone W-2. The groundwater production charges for FY 2011–12 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State" (District Act, Section 26.3).

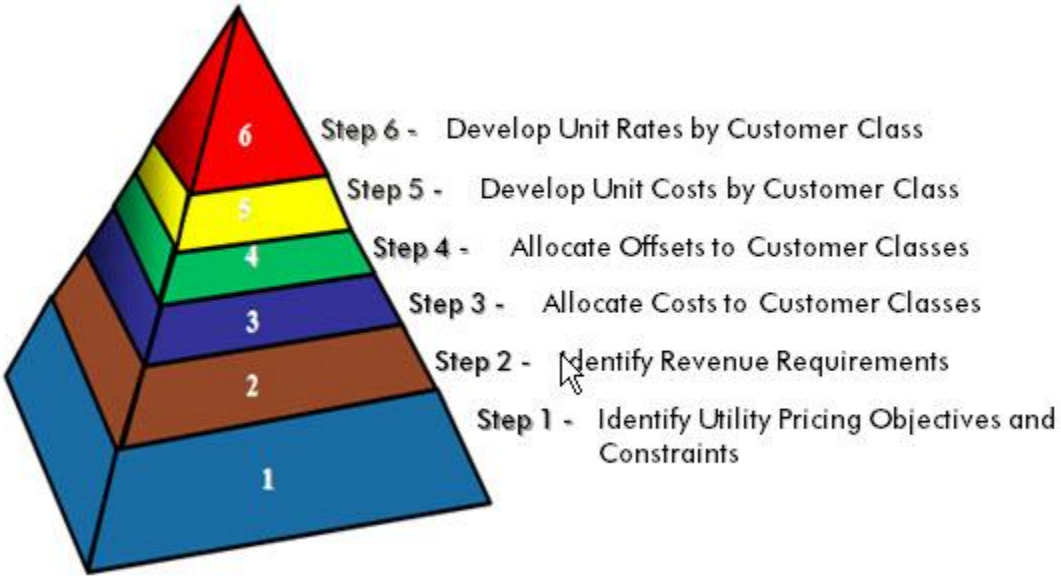
Table 4-6.2 Fiscal Year 2011–12 North County Water Utility Program Requirements and Financing Sources

Cost Center	Ends Policy	FY 12 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	67,243	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	6,640	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Deliver	31,380	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.
Administration & General	Support Services	15,706	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Debt Service	16,286	Principal and Interest payments on outstanding debt
	Capital Improvements	70,019	Capital Improvement Program
	Open Space Credit	2,731	Help preserve the open space benefits provided by agricultural lands
	Operating Cost Reductions/Other Adjustments	(4,970)	Operating Cost reductions or adjustments
	Total Program Requirements	**205,035**	
	Financing Sources		
	Capital Cost recovery	2,971	
	Debt Proceeds	24,042	
	Interest & Other	26,466	
	Property Tax	19,346	
	Treated Water Sales	69,099	
	Surface Water Charges	872	
	Groundwater Production Charges	52,340	
	Capital Carryforward Reserves	11,197	
	Change in Reserves	(1,299)	
	Total Financing Sources	**205,035**	

Figure 4-6.3 and Table 4-6.3 show the cost of service analysis by customer class following six industry standard rate making steps:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Figure 4-6.3 Industry Standard Rate Making Steps



Water Utility pricing objectives and constraints are identified in Resolution 99-21, the District Act, Proposition 218, and existing contracts.

Line 11 in Table 4-6.3 represents rate making steps 2 and 3 summarizing the revenue requirements for North County Zone W-2 including operations costs, capital costs and debt service. Step 2 involves allocating water utility costs between zones W-2 (North County) and W-5 (South County) according to the benefits provided in each zone. Appendix B shows the percentage of operations costs allocated to the South County, along with a brief description of the basis of the allocation. Appendix C shows the percentage of capital and debt service costs allocated to South County along with a brief description of the basis of the allocations. Costs not allocated to the South County are allocated to the North County. Step 3 involves allocating costs directly to each customer class where possible, or allocating based on volume where the program services benefit multiple customer classes.

Line 29 in Table 4-6.3 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each zone and customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 39 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the "open space" credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of treated water to groundwater and surface water users based on proportional water usage. Importing water into the county for treatment and subsequent distribution to treated water users offsets the need to pump water from the ground. Without treated imported water supplies, the groundwater basin would become over drafted. Consequently, the reallocation of treated water cost represents the value of treated water to groundwater and surface water users and facilitates a pricing structure that prevents the over use of the groundwater basin.

Table 4-6.3 Fiscal Year 2011–12 North County (Zone W2) Cost of Service by Customer Class

	FY '12 Projection ($K)	Zone W-2					
		GW		TW	SW		Total W-2
		M&I	AG	M&I	M&I	Ag	
1	**Operating Outlays**						
2	Operations /Operating Projects	28,129	189	66,182	929	22	95,452
3	SWP Imported Water Costs	4,558	32	15,658	292	7	20,547
4	Debt Service	3,071	22	13,090	100	2	16,286
5	**Total Operating Outlays**	35,757	243	94,930	1,322	32	132,284
6							
7	**Capital & Transfers**						
8	Operating Transfers Out	2	-	3	0	-	5
9	Capital Outlays excl. carryforward	19,304	136	39,064	305	7	58,817
10	**Total Capital & Transfers**	19,306	136	39,066	305	7	58,822
11	**Total Annual Program Costs**	55,063	380	133,997	1,627	39	191,107
12							
13	**Revenue Requirement Offsets**						
14	Capital Cost Recovery	(1,384)	(10)	(1,554)	(23)	(1)	(2,971)
15	Debt Proceeds	(7,891)	(56)	(15,968)	(125)	(3)	(24,042)
16	Inter-governmental Services	(908)	(6)	(1,020)	(15)	(0)	(1,950)
17	SWP and W-1 Property Taxes	(3,840)	(27)	(12,303)	(221)	(5)	(16,396)
18	South County Deficit	(305)	(2)	(616)	(5)	(0)	(928)
19	Interest Earnings	(816)	(6)	(916)	(13)	(0)	(1,751)
20	Inter-zone Interest	(37)	(0)	(42)	(1)	(0)	(80)
21	Capital Contributions	(8,453)	(60)	(9,493)	(138)	(3)	(18,147)
22	Perchlorate Response	(1,045)	(7)	(1,173)	(17)	(0)	(2,243)
23	Other	(399)	(3)	(948)	(16)	(0)	(1,367)
24	Reserve Requirements	426	3	863	7	0	1,299
25	**Adjusted Revenue Requirement**	30,412	206	90,825	1,062	26	122,530
26							
27	Volume (KAF)	92.0	0.7	103.3	1.5	0.0	197.4
28							
29	Revenue Requirement per AF	$ 331	$ 316	$ 879	$ 708	$ 703	
30							
31	**Adjustments for Agricultural Preservation**						
32	Allocate WU 1% Ad Valorem Prop Tax	0	(194)	-	-	(25)	(219)
33	Transfer GF 1% Ad valorem Prop Tax	-	-	-	-	-	-
34	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	-	-
35	Revenue Requirement per AF	$ 330.7	$ 17.1	$ 879	$ 708	$ 29.3	
36							
37	**Adjustments to Facilitate Conjunctive Use**						
38	Reallocate TW/SW/RW costs	21,917	-	(21,727)	(190)	-	-
39	Charge per AF	$ 569	$ 17.1	$ 669	$ 581	$ 29.3	
40	Total Revenue ($K)	$52,329	$11	$69,098	$872	$1	$122,311

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer classes

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

South County (Zone W-5) Finances

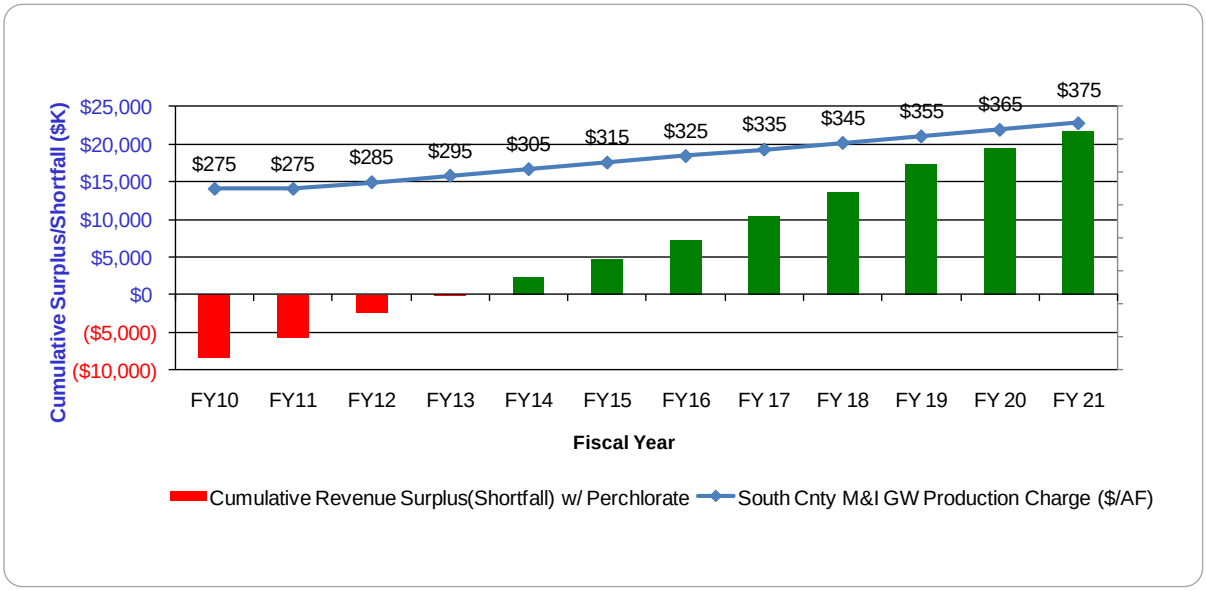
South County (Zone W-5) is generally defined as the portion of Santa Clara County south of Metcalf Road, including Coyote Valley, Morgan Hill, San Martin, Gilroy and other unincorporated areas within the zone. Within the Water Utility Fund, water district staff track revenues and costs associated with the South County Zone W-5 separately so that the groundwater production charge for services that benefit the South County Zone can be calculated.

Charges in the South County (Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing a conjunctive use program, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, charges are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and historically projected charges have been set to keep the cumulative balance near zero, while maintaining relative stability in South County charges. Successive years of surplus or shortfall can occur.

For South County, staff recommends increasing the groundwater production charge to $285 per acre-foot for M&I water and $17.10 per acre-foot for agricultural water. The average household would experience an increase in their monthly bill of $0.34 or about 1 cent per day. Customers may also experience additional water charge increases enacted by their retail water provider.

On a cumulative basis, costs are estimated to exceed revenues by approximately $2.5 million at the end of FY 2011–12. Figure 4-6.4 shows the projected cumulative revenue shortfall under the recommended charge projection for South County. Under this projection, cumulative costs will exceed cumulative revenues and will not be balanced until FY 2012–13. The projection assumes an average increase of 3.2 percent in the M&I groundwater charge between FY 2011–12 and FY 2020–21. The average increase under the high end of the projected range shown in Figure 4-2.1 is 7.0 percent, over the same time frame.

Figure 4-6.4 South County Cumulative Revenue Surplus / Shortfall Projection ($/Thousands)



The revenue shortfall, which began in FY 2002–03 was initially driven by capital investments in recycled water and conservation. In subsequent years, cost increases were driven by program improvements including increased water supply planning and collaboration efforts, installation and operation of more wells to monitor groundwater levels and quality, development of computer models for the groundwater basins, initiation of an asset management program, more maintenance work on San Felipe Division facilities and raw water pipelines, and improved security. Also, increases in imported water contract rates and loss of property tax revenue to the State of California exacerbated the revenue shortfall.

Perchlorate

In 2003, the water district initiated an aggressive strategy on behalf of South County groundwater users to respond to the perchlorate contamination found in the Llagas Subbasin. Perchlorate response costs were funded with North County Zone Water Utility reserves under the expectation that the responsible party would reimburse the water district. The responsible party partially reimbursed the water district for certain costs based on the terms of the finalized settlement agreement. A balance of roughly $4.7 million remained to be recovered to reimburse North County Water Utility reserves. In FY 2010–11, the Board approved staff's recommendation to phase the repayment from South County groundwater users (both agricultural and non-agricultural) over a two-year timeframe. Approximately $2.43 million is budgeted for recovery in FY 2010–11. The remaining amount of $2.24 million is planned for recovery in FY 2011–12.

Open Space Credit

The District Act limits agricultural groundwater production charges to a maximum of 25 percent of the municipal and industrial (M&I) groundwater production charges. Current board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low. To the extent that Proposition 218 applies to the groundwater production charge, it requires that costs to end users be proportional such that one class of users is not subsidizing another.

To comply with the current agricultural groundwater production charge setting policy, staff recommends the open space credit received by South County be $6.0 million in FY 2011–12 (funded by 1 percent ad valorem property taxes). The recommended agricultural groundwater production charge for FY 2011–12 is $17.10 per acre foot, which is 6 percent of the proposed M&I groundwater production charge in South County. It should be noted that the open space credit funds approximately 45 percent of the perchlorate response cost repayment.

Program Requirements and Financing Sources

Table 4-6.4 shows the relationship between expenditures and sources of revenue in South County for FY 2011–12. It is estimated that South County will pay for $11.5 million of operating costs and pay back $2.2 million of perchlorate costs and nearly $3 million in capital costs. The specific operating costs allocated to South County can be found in Appendix B. Details on capital cost recovery can be found in Appendix C. The groundwater production charges recommended for FY 2011–12 in South County Zone W-5 are necessary to conduct, "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State" (District Act, Section 26.3).

Table 4-6.4 Fiscal Year 2011–12 South County Water Utility Program Requirements and Financing Sources

Cost Center	Ends Policy	FY 12 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	7,295	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	1,695	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	66	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.
Administration & General	Support Services	3,036	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Capital Cost Recovery	2,971	Annual payment for completed capital facilities and improvements
	Perchlorate Response Cost Payback	2,243	To reimburse North County Reserves
	Interest (Earned)/Due Utility Reserves	80	Based on cumulative revenue shortfall at 3% interest rate
	Operating Cost Reductions/Other Adjustments	(595)	Operating Cost reductions or adjustments
	Total Program Requirements	**16,791**	
	Financing Sources		
	Open Space Credit	6,013	
	Property Tax & Other Revenue	2,011	
	Surface Water Charges	187	
	Recycled Water Charges	245	
	Groundwater Production Charges	9,263	
	Total Financing Sources	**17,718**	
	FY 12 Revenue Surplus	**928**	

Figure 4-6.3 and Table 4-6.5 show the cost of service analysis by customer class following the six industry standard rate making steps for South County Zone W-5:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Line 11 in Table 4-6.5 represents rate making steps 2 and 3 summarizing the revenue requirements for South County Zone W-5. Costs have been allocated directly to each customer class where possible, or allocated based on volume where the costs benefit multiple customer classes.

Line 29 in Table 4-6.5 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 39 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the "open space" credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of recycled water to groundwater users. Without recycled water supplies, there would be additional demand on the groundwater basin and a higher risk of overdraft. Consequently, the reallocation of recycled water cost represents the value of recycled water to groundwater users and facilitates a pricing structure that helps prevent the over use of the groundwater basin.

Table 4-6.5 Fiscal Year 2011–12 South County (Zone W5) Cost of Service by Customer Class

	FY '12 Projection ($K)	Zone W-5						
		GW		SW		RW		Total W-5
		M&I	AG	M&I	AG	M&I	AG	
1	**Operating Outlays**							
2	Operations /Operating Projects	6,168	4,656	123	309	137	103	11,496
3	SWP Imported Water Costs	-	-	-	-	-	-	-
4	Debt Service	-	-	-	-	-	-	-
5	**Total Operating Outlays**	6,168	4,656	123	309	137	103	11,496
6								
7	**Capital & Transfers**							
8	Operating Transfers Out	-	-	-	-	-	-	-
9	Capital Outlays excl. carryforward	-	-	-	-	-	-	-
10	**Total Capital & Transfers**	-	-	-	-	-	-	-
11	**Total Annual Program Costs**	6,168	4,656	123	309	137	103	11,496
12								
13	**Revenue Requirement Offsets**							
14	Capital Cost Recovery	1,154	931	19	48	468	351	2,971
15	Debt Proceeds	-	-	-	-	-	-	-
16	Inter-governmental Services	(83)	(67)	(1)	(3)	-	-	(155)
17	SWP and W-1 Property Taxes	(534)	(431)	(9)	(22)	(14)	(10)	(1,020)
18	South County Deficit	486	392	8	20	13	9	928
19	Interest Earnings	-	-	-	-	-	-	-
20	Inter-zone Interest	42	34	1	2	1	1	80
21	Capital Contributions	-	-	-	-	-	-	-
22	Perchlorate Response	1,242	1,001	-	-	-	-	2,243
23	Other	(15)	(12)	(0)	(1)	-	-	(29)
24	Reserve Requirements	-	-	-	-	-	-	-
25	**Adjusted Revenue Requirement**	**8,459**	**6,503**	**140**	**353**	**605**	**454**	16,514
26								
27	Volume (KAF)	31.0	25.0	0.5	1.3	0.8	0.6	59.2
28								
29	Revenue Requirement per AF	$ 273	$ 260	$ 280	$ 272	$ 757	$ 757	
30								
31	**Adjustments for Agricultural Preservation**							
32	Allocate WU 1% Ad Valorem Prop Tax	-	(3,538)	-	-	-	-	(3,538)
33	Transfer GF 1% Ad valorem Prop Tax	-	(1,751)	-	-	-	-	(1,751)
34	Transfer WS 1% Ad Valorem Prop Tax	-	(786)	-	(315)	-	(429)	(1,530)
35	Revenue Requirement per AF	$ 273	$ 17.1	$ 280	$ 29.3	$ 757	$ 41.5	
36								
37	**Adjustments to Facilitate Conjunctive Use**							
38	Reallocate TW/SW/RW costs	377	-	9	-	(385)	-	(0)
39	Charge per AF	$ 285	$ 17.1	$ 297	$ 29	$ 275	$ 41.5	
40	Total Revenue ($K)	$8,835	$428	$149	$38	$220	$25	$9,694

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer classes

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

APPENDIX A

WATER UTILITY CHARGE COMPONENTS AND RECOMMENDED CHARGES

Table A-1 Recommended Charge Components for Fiscal Year 2011–12

Component	Charge ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	17.10
M&I	569.00
Basic User, Zone W-5 (South County/Coyote Valley)	
Agricultural	17.10
M&I	285.00
Treated Water Surcharge	
Contract	100.00
Non-contract	50.00
Surface Water Charge	
Water Master	12.17

Table A-2 Recommended Charges for Fiscal Year 2011–12

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater Production		
Zone W-2	$17.10	$569.00
Zone W-5	$17.10	$285.00
Surface Water[1]		
Other Zone W-5 Deliveries[2]	$29.27	$297.17
Other Zone W-2 Deliveries[3]	$29.27	$581.17
Minimum Charge Zone W-5[4]	$213.75	$213.75
Minimum Charge Zone W-2[5]	$426.75	$426.75
Treated Water		
Contract[6]	N/A	$669.00
Non-contract[7]	N/A	$619.00
Recycled Water		
Gilroy	$41.50	$275.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.
[2] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $17.10/AF or $285.00/AF) + Water Master ($12.17/AF).
[3] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $17.10/AF or $569.00/AF) + Water Master ($12.17/AF).
[4] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $285.00/AF).
[5] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $569.00/AF).
[6] Treated Water Charge is the sum of Basic User ($569.00/AF) and Treated Water Surcharge ($100.00/AF).
[7] The charge for non-contract deliveries is the sum of the basic user charge ($569.00/AF) and the treated water surcharge for non-contract water ($50.00/AF).

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $)

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2012	Basis of Allocation
Source of Supply	91041002	Water Supply Operations Agreements	10.7%	21	175	195	M&I Water Usage Ratio
	91041012	Water Operations Planning	13.5%	40	257	297	Raw Water Deliveries
	91041018	Groundwater Management Protocols	36.1%	130	229	359	Groundwater Production Ratio
	91042008	Infrstr Reliability Program	10.7%	41	345	386	M&I Water Usage Ratio
	91042011	Bay Area Water Supply Coordin	0.0%	-	63	63	No South County Benefit
	91042014	Urban Water Management Plan	10.7%	9	73	82	M&I Water Usage Ratio
	91061001	Env Planning and Compliance	18.3%	301	1,344	1,644	Estimated Labor
	91061005	Water Supply Accounting	13.5%	28	181	210	Raw Water Deliveries
	91061012	Environmental Compliance Sup	13.5%	5	30	34	Raw Water Deliveries
	91081007	Dam Safety Program	22.5%	274	945	1,219	Program Benefit Calculation
	91101001	Advanced Recycled Water Treatment Facility Operations	0.0%	-	1,482	1,482	No South County Benefit
	91101002	Advanced Recycled Water Treatment Facility Maintenance	0.0%	-	668	668	No South County Benefit
	91111001	Water Rights	23.7%	56	181	237	Water Rights Volume
	91131004	Imported Water Program	10.4%	455	3,920	4,375	Imported Water Ratio
	91131006	IW San Felipe Division Delvrs	12.6%	2,475	17,170	19,646	Program Benefit Calculation
	91131007	IW South Bay Aqueduct Delvrs	0.0%	-	20,547	20,547	No South County Benefit
	91131008	State Water Project Contract Obligations	0.0%	-	-	-	No South County Benefit
	91151001	Water Conservation-Prog Support	6.0%	57	894	951	Population
	91151002	Water Utility Customer Relations	6.0%	15	230	244	Population
	91151007	Water Conservation-Residential	5.5%	109	1,871	1,980	Program Benefit Calculation
	91151008	Water Conservation-Commercial/Ind	4.9%	92	1,787	1,879	Program Benefit Calculation
	91151009	Water Conservation-AG	79.3%	345	90	435	Labor hours
	91151010	Water Conservation-Landscape	6.5%	130	1,864	1,994	Program Benefit Calculation
	91152007	Water Conservation Campaign	6.0%	52	820	872	Population
	91181001	Water Recycling - General	6.0%	169	2,648	2,817	Population
	91182002	Integrate AWT with supplies	0.0%	-	492	492	No South County Benefit
	91211004	San Felipe Reach 1 Operation	16.9%	76	371	447	CVP Imported Water Ratio
	91211084	San Felipe Reach1 Ctrl and Ele	16.9%	49	242	291	CVP Imported Water Ratio
	91211085	SF Reach 1-Engineering - Other	16.9%	18	87	104	CVP Imported Water Ratio
	91211099	San Felipe Reach 1 Gen Maint	16.9%	168	827	995	CVP Imported Water Ratio
	91221002	San Felipe Reach 2 Operation	16.9%	8	39	47	CVP Imported Water Ratio
	91221006	SF Reach 2-Engineering - Other	16.9%	17	86	103	CVP Imported Water Ratio
	91221099	San Felipe Reach 2 Gen Maint	16.9%	17	81	98	CVP Imported Water Ratio
	91231002	San Felipe Reach 3 Operation	8.5%	15	163	178	CVP Imported Water Ratio adjusted for Coyote PP
	91231084	San Felipe Reach3 Ctrl and Ele	8.5%	20	215	234	CVP Imported Water Ratio adjusted for Coyote PP
	91231085	SF Reach 3-Engineering - Other	8.5%	9	101	110	CVP Imported Water Ratio adjusted for Coyote PP
	91231099	San Felipe Reach 3 Gen Maint	12.7%	79	545	624	CVP Imported Water Ratio adjusted for Coyote PP
	91451002	Well Ordinance Program	11.8%	136	1,017	1,153	Well Permits and Inspections
	91451005	Source Water Quality Mgmt	10.7%	48	400	448	M&I Water Usage Ratio
	91452011	Invasive Mussel Prevention	13.5%	82	527	609	Raw Water Deliveries
	91452042	Salt and Nutrient Mgmt Plan	36.1%	60	106	166	Groundwater Production Ratio
	91551001	Groundwater Monitoring	36.1%	297	526	824	Groundwater Production Ratio
	91551002	Groundwater Supply Managemen	36.1%	376	666	1,042	Groundwater Production Ratio
	91742041	Comprehensive Habitat Cons P	18.6%	46	203	250	Program Benefit Calculation
	91761001	Local Res / Div Plan & Analysis	19.3%	102	428	530	Total Water Deliveries Ratio
	91761002	Local Reservoir/Diversion Ops	19.3%	44	185	230	Total Water Deliveries Ratio
	91761099	Dams / Reservoir Gen Maint	21.6%	328	1,191	1,519	Program Benefit Calculation
	91791012	Groundwater Quality Manageme	36.1%	476	842	1,318	Groundwater Production Ratio
	91952003	Pacheco Reservoir Investigation	16.9%	18	89	107	CVP Imported Water Ratio
				7,295	**67,243**	**74,538**	

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) . . . (CONTINUED)

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2012	Basis of Allocation
Raw Water Transmission & Distribution	92041014	Environmental Strategy-FAHCE	4.3%	86	1,905	1,991	Coyote Water Supply Ratio
	92061012	Environmental Compliance Sup	13.5%	8	54	63	Raw Water Deliveries
	92261099	Vasona Pump Station Gen Main	0.0%	-	75	75	No South County Benefit
	92761001	Raw Water T and D Genrl Oper	13.5%	107	683	790	Raw Water Deliveries
	92761006	Rchrg / RW Field Fac Asset Mgt	34.4%	82	156	238	Groundwater Recharge Ratio
	92761007	Rchrg / RW Field Ops Plan& Analysis	34.4%	89	170	259	Groundwater Recharge Ratio
	92761008	Recycled Water T&D Genrl Maint	100.0%	120	-	120	Benefits Only South County
	92761009	Recharge/RW Field Ops	34.4%	623	1,189	1,812	Groundwater Recharge Ratio
	92761010	Rchrg / RW Field Fac Maint	34.4%	252	481	734	Groundwater Recharge Ratio
	92761011	Untreated Water Field Ops	38.8%	23	37	60	Untreated Water Deliveries Ratio
	92761012	Untreated Water Prog Plan&Analysis	38.8%	12	18	30	Untreated Water Deliveries Ratio
	92761082	Raw Water T&D Ctrl and Electr	13.5%	78	498	576	Raw Water Deliveries
	92761083	Raw Water T&D Eng Other	13.5%	23	149	172	Raw Water Deliveries
	92761085	Anderson Hydrelctrc Fclty Main	13.5%	9	60	70	Raw Water Deliveries
	92761086	Anderson Hydrelctrc Faclty Ops	13.5%	5	34	39	Raw Water Deliveries
	92761099	Raw Water T / D Gen Maint	13.5%	118	758	876	Raw Water Deliveries
	92781002	RW Corrosion Control	13.5%	58	372	430	Raw Water Deliveries
				1,695	**6,640**	**8,335**	
Water Treatment and Treated Water Transmission & Distribution	93061012	Environmental Compliance Sup	0.0%	-	405	405	No South County Benefit
	93081008	W T General Water Quality	0.0%	-	1,311	1,311	No South County Benefit
	93081009	Water Treatment Plant Engineering	0.0%	-	499	499	No South County Benefit
	93231007	PWTP Landslide Monitoring	0.0%	-	109	109	No South County Benefit
	93231009	PWTP General Operations	0.0%	-	4,149	4,149	No South County Benefit
	93231099	Penitencia WTP General Maint	0.0%	-	1,708	1,708	No South County Benefit
	93281005	STWTP - General Operations	0.0%	-	4,732	4,732	No South County Benefit
	93281099	Santa Teresa WTP General Maint	0.0%	-	1,857	1,857	No South County Benefit
	93291012	RWTP General Operations	0.0%	-	6,830	6,830	No South County Benefit
	93291099	Rinconada WTP General Maint	0.0%	-	2,754	2,754	No South County Benefit
	93401002	Wtr District Laboratory	0.6%	20	3,370	3,390	Lab Analyses
	93761001	SF/SCVWD Intertie General Ops	0.0%	-	73	73	No South County Benefit
	93761004	Campbell Well Field Operations	0.0%	-	148	148	No South County Benefit
	93761005	Campbell Well Field Maintenance	0.0%	-	29	29	No South County Benefit
	93761006	Treated Wtr Ctrl & Elec Eng	0.0%	-	1,760	1,760	No South County Benefit
	93761099	SF/SCVWD Intertie Gen Maint	0.0%	-	128	128	No South County Benefit
	94761005	TW T&D - Engineering - Other	0.0%	-	152	152	No South County Benefit
	94761099	Treated Water T/D Gen Maint	0.0%	-	637	637	No South County Benefit
	94762007	SCADA Systems Upgrades	13.5%	47	299	346	Raw Water Deliveries
	94781001	Treated Water T/D Corrosion	0.0%	-	430	430	No South County Benefit
				66	**31,380**	**31,446**	

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $). . . (CONTINUED)

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2012	Basis of Allocation
Administration & General	95001090	Unscoped Operations Activities	10.7%	54	447	500	M&I Water Usage Ratio
	95011003	Asset Protection Support	20.0%	110	439	549	Program Benefit Calculation
	95031002	Grants Management	10.7%	11	89	100	M&I Water Usage Ratio
	95041025	SMP Biodiversity Monitoring	10.7%	3	24	26	M&I Water Usage Ratio
	95041039	Integrated Regional Water Mgmt	10.7%	11	95	106	M&I Water Usage Ratio
	95041042	Llagas Fire Mgmt	100.0%	102	-	102	Benefits Only South County
	95042037	Future Funding Strategies	10.7%	6	53	59	M&I Water Usage Ratio
	95061007	WU Asset Management Program	1.4%	6	424	430	Program Benefit Calculation
	95061012	Rental Expense San Pedro,MH	100.0%	22	-	22	Benefits Only South County
	95061027	Water Utility Health & Safety	10.7%	23	196	220	M&I Water Usage Ratio
	95061032	Water Utility Ops Safety Training	10.7%	45	374	419	M&I Water Usage Ratio
	95061037	WUE Training & Development	10.7%	62	520	582	M&I Water Usage Ratio
	95061038	WUE Administration	10.7%	717	5,985	6,702	M&I Water Usage Ratio
	95061041	WU As-Built Drawing Control	10.7%	22	180	202	M&I Water Usage Ratio
	95061045	District Asset Mgmt Framework	10.7%	63	530	593	M&I Water Usage Ratio
	95062036	Climate Action Planning	10.7%	16	130	146	M&I Water Usage Ratio
	95062046	District CMMS Administration	10.7%	15	124	139	M&I Water Usage Ratio
	95071041	Welding Services	1.4%	4	261	265	Weighted Labor
	95101003	W2 W5 Water Revenue Program	64.8%	779	423	1,202	Labor hours
	95111003	Water Use Measurement Genera	35.0%	469	871	1,340	Labor hours
	95121001	Fin/Economic Water Rate Stud	10.7%	53	440	493	M&I Water Usage Ratio
	95731001	Water Supply Modeling/Analys	10.7%	43	359	402	M&I Water Usage Ratio
	95741001	WUE Long-term Planning	10.7%	103	863	966	M&I Water Usage Ratio
	95761003	SCADA Network Administration	1.8%	2	134	136	Program Benefit Calculation
	95761071	Emergency Preparedness Prog	6.0%	77	1,207	1,284	Population
	95771011	District Urban Runoff Program	13.5%	10	63	73	Raw Water Deliveries
	95771031	HAZMAT Emergency Response	9.1%	2	20	22	Emergency Response Events
	95811043	Hydrologic Data Msrmt & Mgmt	16.6%	144	724	869	Stream Gauge Logations
	95811046	Warehouse Services	10.7%	51	426	477	M&I Water Usage Ratio
	95811049	X Valley Level / Benchmark	4.7%	11	215	226	Program Benefit Calculation
	95811054	District Real Property Administration	0.0%	-	91	91	No South County Benefit
				3,036	**15,706**	**18,741**	
Other		Adjustments (Assumed Net Reduction)	10.7%	(595)	(4,970)	(5,565)	M&I Water Usage Ratio
				(595)	**(4,970)**	**(5,565)**	
			TOTAL	**11,496**	**115,999**	**127,495**	
	Note: Projects 91231002, 91231084, 912341085, and 91231099 have been adjusted for the Coyote Pumping Plant costs.						

APPENDIX C

SOUTH COUNTY CAPITAL COST RECOVERY

(In Thousands $)						
Job Description	Total Project Cost	South County %	South County Cost	FY 12 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to the South
Coyote Dam Outlet**	$ 6,703	15.0%	$ 1,005	$ 81	FY 12	Water usage
Uvas Reservoir Valves Replace	$ 303	100.0%	$ 303	$ 25	FY 14	Benefits only South County
Madrone Pipeline Replace	$ 389	100.0%	$ 389	$ 31	FY 14	Benefits only South County
Uvas Dam & Reservoir	$ 1,124	100.0%	$ 1,124	$ 88	FY 22	Benefits only South County
San Pedro Recharge Facility	$ 1,882	100.0%	$ 1,882	$ 147	FY 22	Benefits only South County
San Pedro Recharge house	$ 700	100.0%	$ 700	$ 47	FY 31	Benefits only South County
Recycled Water Improvements I	$ 7,232	100.0%	$ 7,232	$ 481	FY 32	Benefits only South County
Recycled Water Improvements II	$ 118	100.0%	$ 118	$ 8	FY 33	Benefits only South County
Recycled Water Improvements III	$ 1,721	100.0%	$ 1,721	$ 115	FY 34	Benefits only South County
Water Banking Rights	$ 6,226	8.0%	$ 498	$ 33	FY 35	Total Imported Water Ratio
Geodetic Control Maintenance	$ 236	41.0%	$ 97	$ 6	FY 36	Survey Analysis
Recycled Water - SCRWA Filter Upgrade	$ 3,257	100.0%	$ 3,257	$ 216	FY 37	Benefits only South County
Water Banking FY 06	$ 18,895	9.0%	$ 1,701	$ 113	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 7,137	10.5%	$ 747	$ 747	N/A	Repayment Cost Distribution
Small Caps, San Felipe	$ 996	16.9%	$ 168	$ 168	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	15.1%	$ 681	$ 45	FY 39	CVP Imported Water Ratio
SC Tunnel Landslide Mitigation	$ 313	15.1%	$ 47	$ 3	FY 39	CVP Imported Water Ratio
Small Caps, San Felipe Reach 3	$ 1,407	16.9%	$ 238	$ 201	N/A	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	1.5%	$ 32	$ 2	FY 36	Program benefit calculation
Water Infrastructure Baseline Improvement	$ 2,403	3.6%	$ 87	$ 6	FY 38	Spare pipe usage
Coyote Dam Control Building Improvement	$ 444	10.2%	$ 45	$ 3	FY 40	M&I Water Usage Ratio
Raw Water Control System	$ 9,188	4.3%	$ 399	$ 26	FY 37	Program benefit calculation
Small Caps, Raw Water	$ 1,156	13.5%	$ 156	$ 156	N/A	Raw Water Usage
Information Systems Management	$ 5,802	9.8%	$ 569	$ 38	FY 40	M&I Water Usage Ratio
Peoplesoft Upgrade	$ 78	9.8%	$ 8	$ 1	FY 39	M&I Water Usage Ratio
Corp Yard Relocation	$ 26	10.2%	$ 3	$ 0	FY 40	M&I Water Usage Ratio
Capital Program Administration	$ 2,510	7.4%	$ 185	$ 185	N/A	Total Capital Cost Ratio
Grand Total	**$ 86,889**		**$ 23,391**	**$ 2,971**		

* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

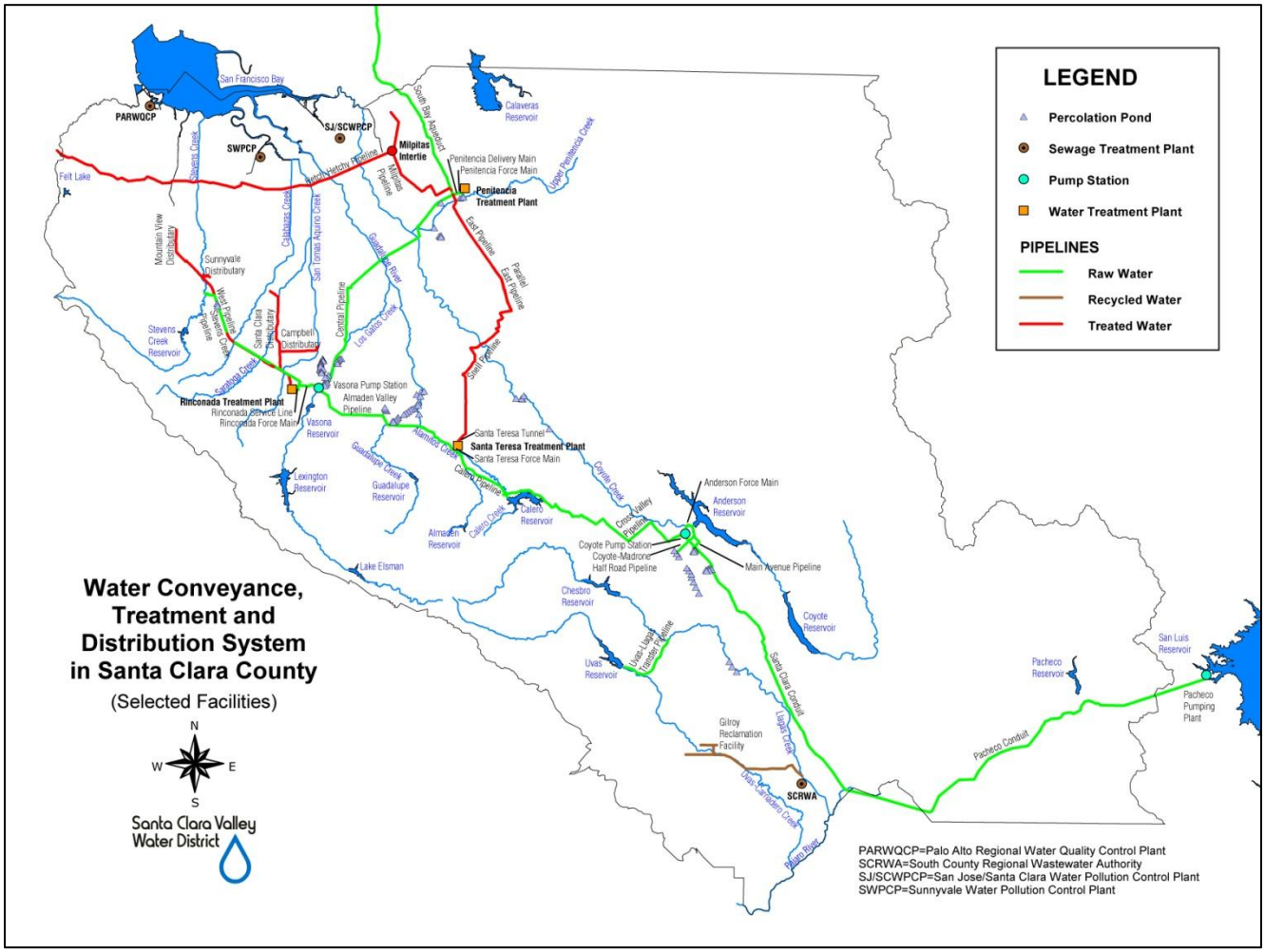
** Actual project costs unable to be verified as the financial system in place in the 1980's has long since been retired

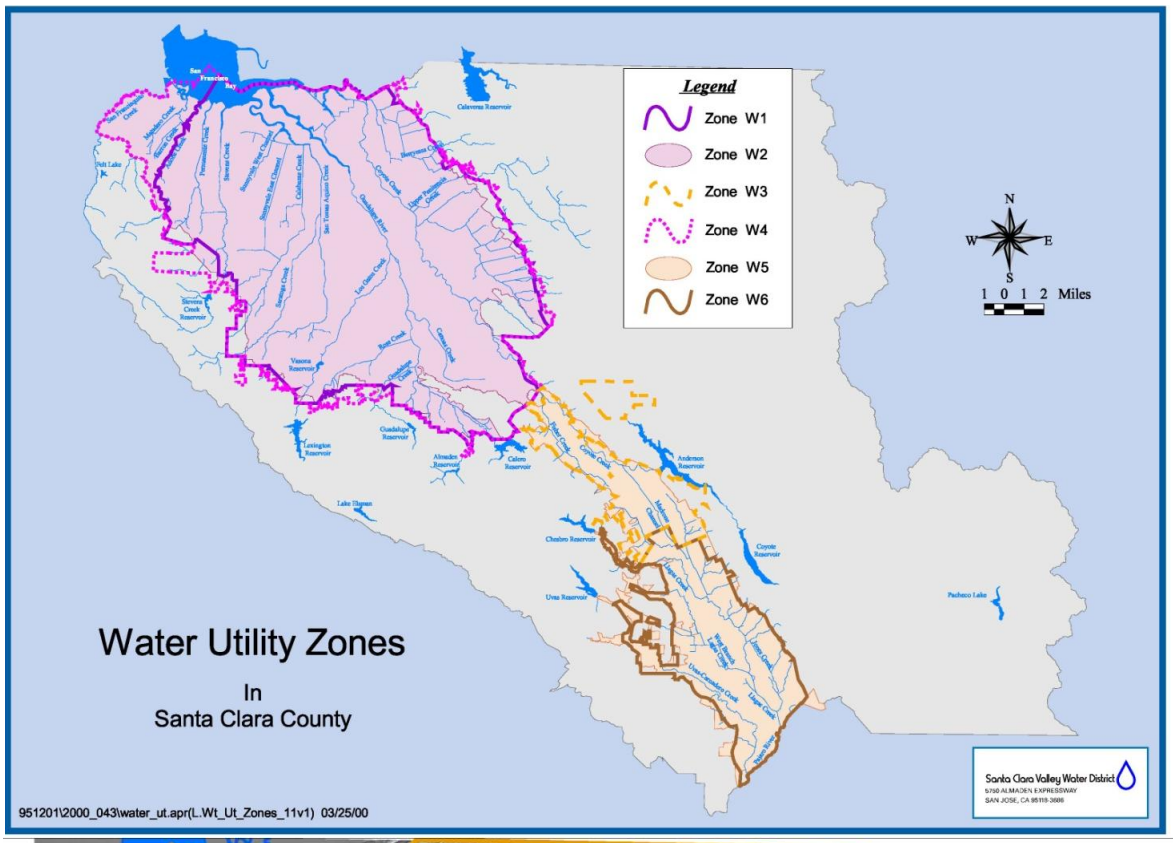
APPENDIX D
Acronyms

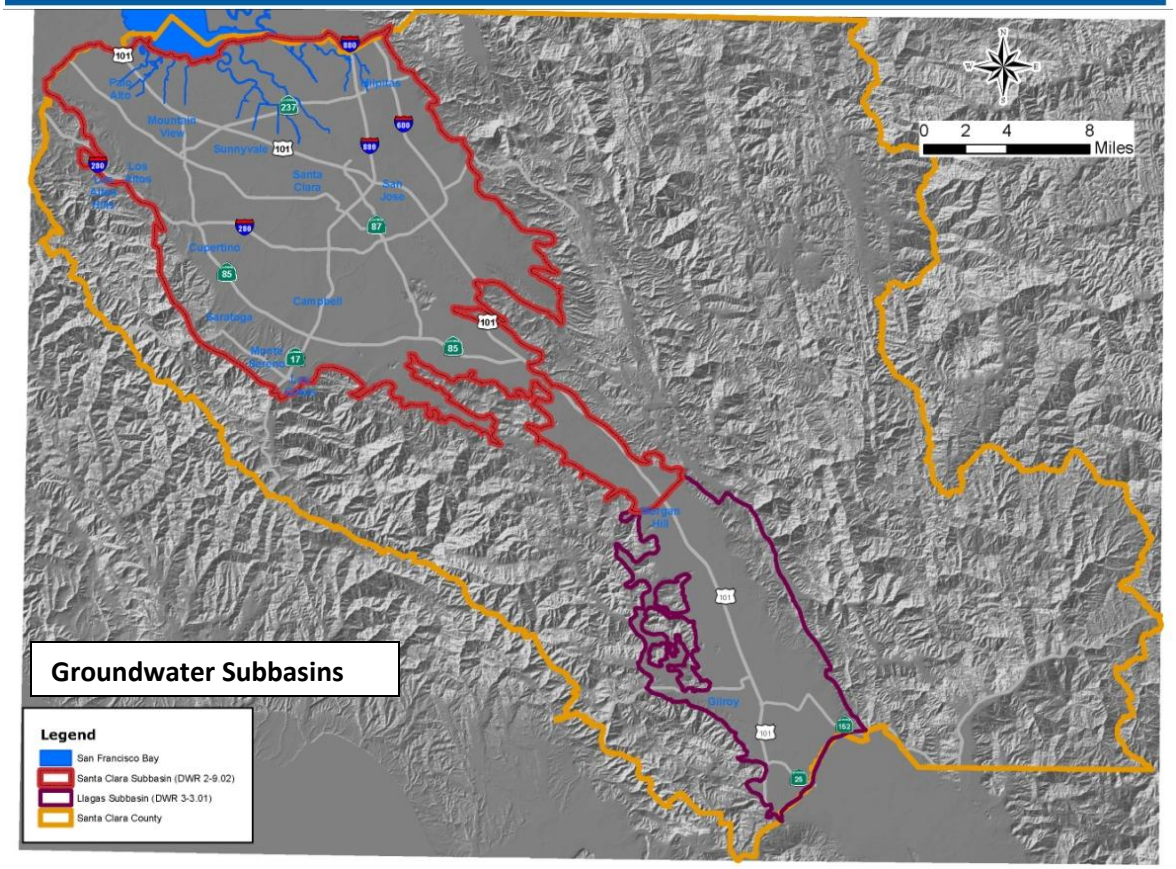
ABAG	Association of Bay Area Governments
AF	Acre Feet
AG	Agriculture
BDCP	Bay Delta Conservation Plan
board	Board of Directors
CESA	California Endangered Species Act
CIP	Capital Improvement Project
CVP	Central Valley Project
DHCCP	Delta Habitat Conservation and Conveyance Program
DWR	Department of Water Resources
ESA	Endangered Species Act
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FY	Fiscal Year
GW	Groundwater
HCP	Habitat Conservation Plan
IWRP	Integrated Water Resources Plan
Llagas Subbasin	Groundwater basin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area south of Cochrane Road
M&I	Municipal and Industrial
NOAA	National Oceanic and Atmospheric Administration
North County	Northern Santa Clara County, north of Metcalf Road
RFC	Raftelis Financial Consultants, Inc.
RW	Recycled Water
SFPUC	San Francisco Public Utilities Commission
SJWC	San Jose Water Company
SWP	State Water Project
SW	Surface Water
Santa Clara Valley Subbasin	Groundwater basin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area north of Cochrane Road and includes Coyote Valley
South County	Southern Santa Clara County, south of Metcalf Road
TW	Treated Water
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
Valley HP	Santa Clara Valley Habitat Plan
Zone W-2	Charge zone W-2, as defined by zone boundary in map of Water Utility Zones
Zone W-5	Charge zone W-5, as defined by zone boundary in map of Water Utility Zones
water district	Santa Clara Valley Water District

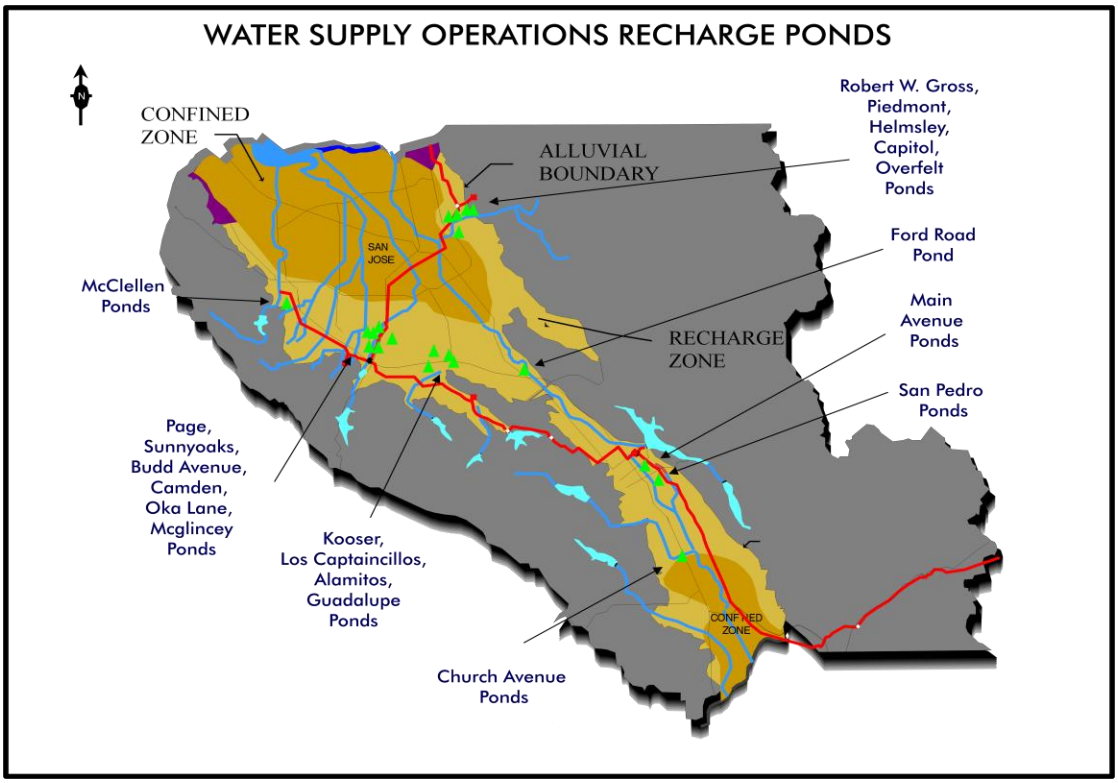
APPENDIX E

MAPS



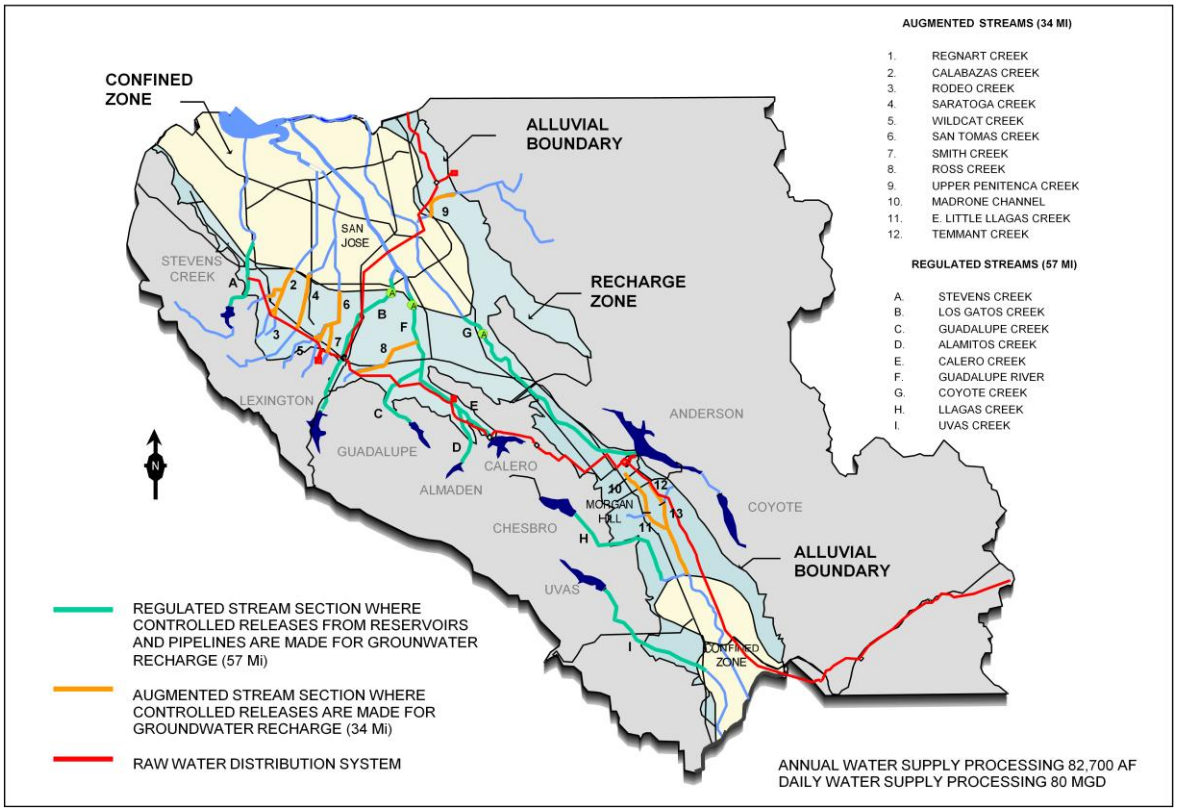

Legend
Zone W1
Zone W2
Zone W3
Zone W4
Zone W5
Zone W6
N
W
E
S
1 0 1 2 Miles
Water Utility Zones
In
Santa Clara County
Santa Clara Valley Water District
951201\2000_043\water_ut.apr(L.Wt_Ut_Zones_11v1) 03/25/00


0 2 4 8 Miles
Groundwater Subbasins
Legend
San Francisco Bay
Santa Clara Subbasin (DWR 2-9.02)
Llagas Subbasin (DWR 3-3.01)
Santa Clara County



Water Supply Operations In-Stream Recharge

91 MILES OF REGULATED AND UNREGULATED AUGMENTED STREAMS WHERE FLOW IS MANAGED BY WATER SUPPLY FOR INSTREAM GROUNDWATER RECHARGE



Santa Clara Valley Water District

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686
Phone: (408) 265-2600
Fax: (408) 266-0271
www.valleywater.org